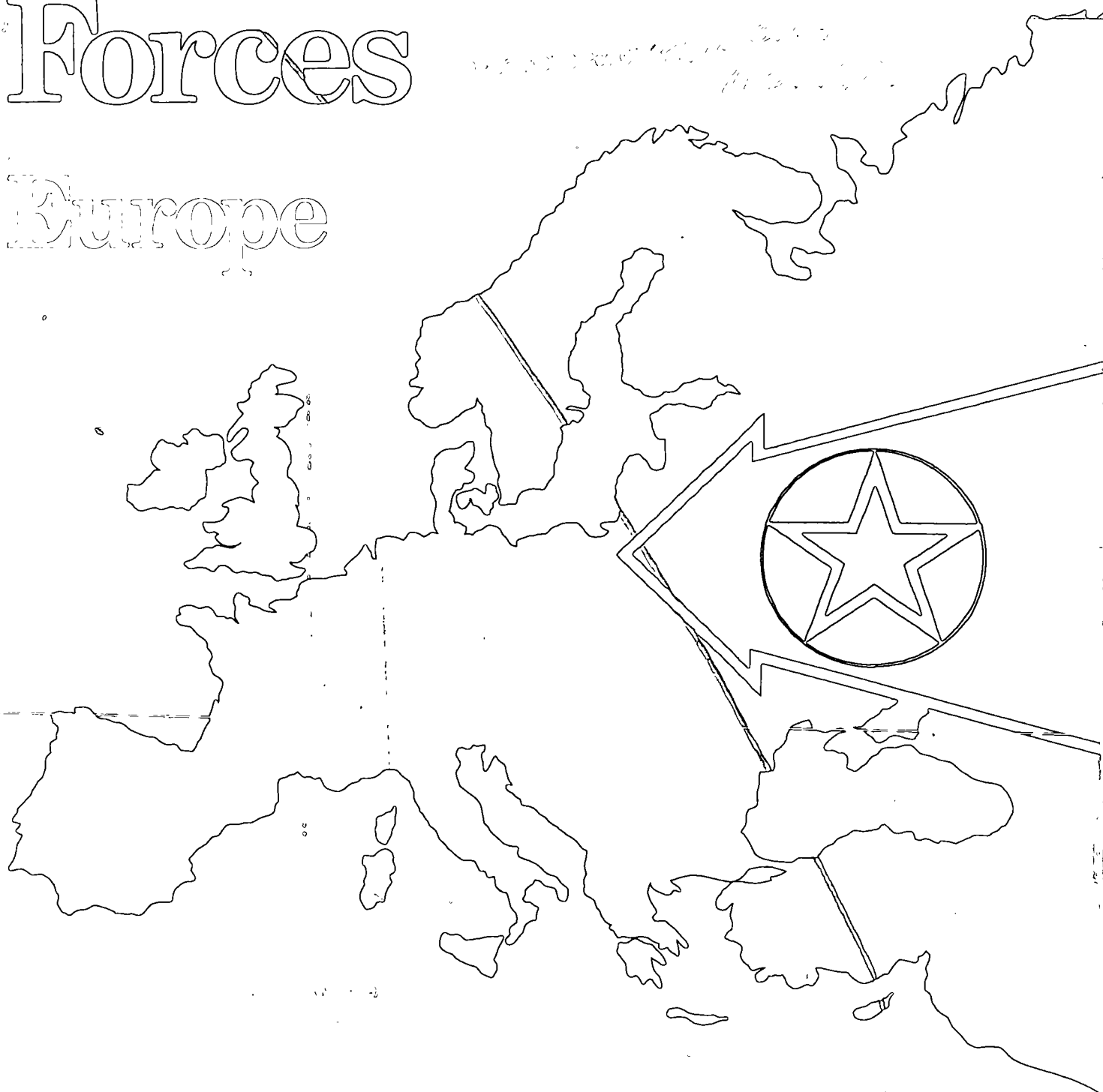
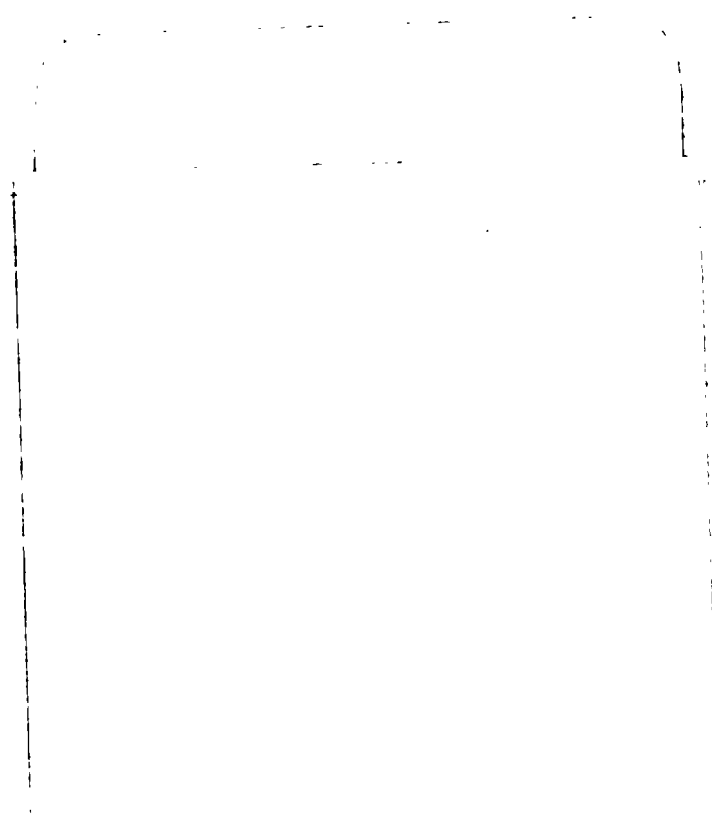
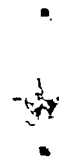


FM 30-102

Opposing Forces

Europe





Opposing Forces Europe

Introduction

This manual provides the US soldier information concerning opposing forces weapons, equipment and tactics, for use in accomplishing our objective—WINNING THE LAND BATTLE of the next war, even though outnumbered. Because entire forces can be destroyed quickly if they are improperly employed and international pressures to stop fighting can bring about an early cessation of hostilities, the US may find itself in a short, intense war—the outcome of which would be dictated by the results of initial combat. The US soldier must anticipate combat against forces with modern weapons, greater numbers, and nearby supply sources. To win, we will need capable weapons, proficient teams and crews, and effective tactics and techniques which exploit the tactical vulnerabilities of the opposing force. The tactics, doctrine, and force structure depicted in this manual provides a basis for training to win the battle. However, this manual is not, nor is it intended to be an authoritative reference on any specific military power. Rather, it is intended to be an unclassified training manual which discusses a typical opposing force which may be found in the European environment. For confirmation of details of tactics, doctrine, organization or equipment of a specific foreign nation, refer to other source material found in appendix J.

Opposing Forces, Europe manual is designed to accomplish four primary purposes.

- To provide realism for training.
- To add emphasis to intelligence training.
- To provide an unclassified data base for developing the scenario.
- To provide an intelligence awareness for exercise participants of the basic differences between the United States Army and potential opposing forces.

Terms used in this manual are in accordance with AR 310-25. Additional explanation of terms pertaining to Opposing Forces Europe are contained in appendix I, Glossary.

Symbols used in this manual are US symbols taken from FM 21-30. Some minor deviations are found in depicting foreign equipment. Symbols requiring an explanation are contained in appendix F, Symbols.

Throughout this manual the pronouns "he," "him," and "his" are used for both male and female personnel.

Opposing Forces Europe

Introduction	i
Chapter 1 Personnel and Weapons	1-1
Chapter 2 Basic Tactical Doctrine	2-1
Chapter 3 The Motorized Rifle Company	3-1
Chapter 4 The Tank Company	4-1
Chapter 5 The Motorized Rifle Battalion	5-1
Chapter 6 The Tank Battalion	6-1
Chapter 7 The Motorized Rifle Regiment	7-1
Chapter 8 The Tank Regiment	8-1
Chapter 9 The Motorized Rifle Division	9-1
Chapter 10 The Tank Division	10-1
Chapter 11 The Combined Arms Army	11-1
Chapter 12 The Tank Army	12-1
Chapter 13 The FRONT	13-1
Chapter 14 Combat Support Operations	14-1
Chapter 15 Combat Service Support Operations	15-1
Chapter 16 Special Operations	16-1
Chapter 17 Training Tips	17-1

Appendix A	Organization, Personnel Weapons and Equipment Charts	A-1
Appendix B	Order of Battle Holdings	B-1
Appendix C	Unit Identification	C-1
Appendix D	Index of Units	D-1
Appendix E	Personalities	E-1
Appendix F	Symbols	F-1
Appendix G	Equipment Performance Charts	G-1
Appendix H	Movement Data	H-1
Appendix I	Glossary	I-1
Appendix J	References	J-1
Appendix K	Index	K-1

Chapter 1 PERSONNEL AND WEAPONS

Section 1—The Soldier

General

The opposing forces soldier of today is a far different individual than his ancestors who fought in World War II. Today, the average young man in the armed forces is better educated, has a broader outlook on society, has been thoroughly inculcated in Communist dogma, and has been trained with weapons and tactics that are at least the equal of any in the world. His view of the world has been shaped almost from the day of his birth, and he has been taught that his principal duty is not to himself but to his country. It is with this spirit that the opposing forces soldier accepts military service, if not with enthusiasm, then at least with an attitude of an honor and an acceptance of duty for his motherland. He makes a good soldier; one who obeys orders and one who can live, if necessary, under relatively primitive conditions. The law provides that all able-bodied male citizens, upon reaching their 18th birthday, are subject to military service with the Army, the Air Army, Navy, Border or Security troops. The majority of opposing forces soldiers spend 2 years on active duty.

Training

A formal program of preinduction training consists of 140 hours of instruction (35 on civil defense) in a variety of military subjects. Ideological training is also included in all instruction, political and military, and is given by reserve officers and some noncommissioned officers. The instruction is required of all 9th and 10th grade students in general education secondary schools and vocational technical schools. The preinduction training classes are normally held once a week for 2 hours. Once every year students are taken to summer camp.

After induction into the Army, the soldier takes basic training. This training is similar to that of the US system except that each major unit has its own basic training center. After basic training, the soldier is formerly sworn into the Army in the same unit in which he took basic, and his two-year commitment starts on this date.

All training is simple, repetitious, and realistic. The opposing forces soldier trains 6½ days a week. This soldier has no civilian clothes, no privately owned vehicle, little money, and no nearby girl friend. He is a 24 hours-a-day, 7-days-a-

TABLE OF CONTENTS

Section 1

The Soldier	1-1
General	1-1
Training	1-1
Personal Traits	1-2
Political Training	1-3
The Daily Training Program	1-3
Summary	1-4

Section 2

Small Arms Weapons	1-4
Infantry Weapons	1-4

Section 3

Antitank Weapons	1-5
Recoilless Gun	1-6
Antitank Guided Missile	1-6
Assault/Antitank Gun	1-7

Section 4

Mortars and Artillery Pieces	1-8
Mortars	1-8
Artillery Pieces	1-9

Section 5

Tactical Artillery Missiles and Multiple Rocket Launchers	1-10
Multiple Rocket Launchers (MRL) ...	1-10
Free Rockets and Tactical Artillery Missiles	1-11

Section 6

Air Defense Weapons	1-12
Antiaircraft Guns	1-12
Surface-to-Air Guided Missiles (SAM)	1-13

Section 7

Armored Fighting Vehicles	1-14
General	1-14
Amphibious Wheeled Reconnaissance Vehicles	1-14
Amphibious Wheeled Armored Fighting Vehicles ...	1-14
Amphibious Tracked Armored Fighting Vehicles	1-15
Tanks	1-15

Section 8

Landmines	1-17
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week soldier. He has little free time, and the few minutes he does have off at the end of the day are spent on care and cleaning of equipment and personal reading for political education classes. The soldier earns the equivalent of \$4.22 a month.

The opposing forces soldier is in excellent physical condition. This is because his spartan way of life is more demanding than ours. He walks a good deal because he does not own a car. Great emphasis is placed on physical training, and competition exists at all levels. In garrison, the morning begins with calisthenics followed by a brisk run.

The opposing forces army is a field army. Although his training is simpler and more repetitious than that in the US, the opposing forces soldier is first and foremost a field soldier. He spends most of his training day learning how to live and fight in the field. Theory is not offered as a substitute for actual field conditions. The opposing forces insist on field training, and they produce soldiers who have lived and trained under adverse, all-weather conditions.

Personal Traits

Discipline. Prior to entering military service, the opposing forces soldier has become aware of the importance of strict and swift compliance with orders. No latitude is given, and the military authorities attempt to make the soldier obey the order without questioning. Traditionally, the stress has been on blind obedience, but this has become more difficult to obtain. Attempts are being made to effect a change, emphasizing the importance of making the soldier a consciously disciplined person and not a robot. One reason for the changed stress in discipline is the increased educational level of the armed forces personnel. It is no longer productive simply to shout commands at a soldier. It is becoming increasingly necessary to explain to the soldiers why they have to perform certain actions. Regardless of emphasis, the opposing forces soldier would be compelled to be a disciplined soldier because he is acutely aware of the importance of his military record. His future civilian life is affected significantly by the quality of his active duty service.

Initiative. The constant stress on discipline and strict compliance with orders and instructions leads to one of the more notable personality traits among all layers of opposing forces society—an almost total lack of initiative. The opposing forces soldier is no exception. He is the product of a highly structured society which places great reliance on direction “from above.” Matters are further complicated for the soldier by the knowledge that his society is dedicated to the conformist, the man who goes along with the group’s ideas, who is not considered different from others. This has the effect, in the long run, of encouraging the advancement of mediocre personnel and creating a group in which everyone has the same approach to life and responds in the same way to challenges. Most opposing forces enlisted men are affected by a general lack of initiative. They tend to avoid responsibility and “hide behind their comrades.” They live according to the rule: “If they order it, I’ll do it. If they don’t, I won’t move a finger.”

Attitude Toward the Military. Prior to induction, the opposing forces youth is conditioned to look on military service as an honor and a duty. Therefore, he enters active duty if not with enthusiasm then at least with an attitude of acceptance of the system. Once on active duty, he finds the training interesting and to some extent challenging. He shares a strong bond of comradeship with his fellow

soldiers and enjoys their company. His living conditions are probably equal to those he knew in civilian life, and he is kept too busy to be much affected by the trivial irritants of military life. On the other hand, until recently there was little career or promotion incentive for the conscript, and this must have caused some degree of apathy. He knows, however, that his military record will reflect on his future civilian life and therefore avoids appearing uninterested. Above all, he avoids conflict with his superiors. Overall, the opposing forces soldier serves with a commendable attitude but, like conscripts everywhere, looks forward to the day he can return to civilian life and the pursuit of his own interests.

Political Training

The political officer is a deputy commanding officer. He operates in those areas traditionally reserved for the executive officer, training officer, and information and education officer.

The opposing forces soldier receives political indoctrination from birth to grave. About 60 percent of all young soldiers are Komsomol members. Soldiers receive political "education" or "ideological indoctrination" on a weekly and daily basis. Political officers also strive to set a positive example for young enlisted men of the unit. The political indoctrination process, although boring at times, is effective. The soldier is greatly influenced by the massive propaganda machinery of his nation.

The Daily Training Program

The basic idea behind the daily training program is to keep a conscript busy from reveille to lights out—a 16-hour day. A typical daily training schedule is shown below.

Activity	From (hrs)	To (hrs)	Duration (minutes)
Reveille	0600		
PT	0610	0640	30
Washing—Bed Making	0640	0700	20
Morning Inspection	0700	0710	10
Listening to Latest News	0710	0720	10
Orders for the Day	0720	0750	30
Breakfast	0755	0815	20
First Training Period	0830	0920	50
Second Training Period	0930	1020	50
Third Training Period	1030	1120	50
Fourth Training Period	1130	1220	50
Fifth Training Period	1230	1320	50
Sixth Training Period	1330	1420	50
Seventh Training Period	1430	1520	50
Wash-up and Brush-up	1520	1530	10
Lunch	1530	1600	30
After Lunch Rest	1600	1630	30
Maintenance of Technical Equipment	1630	1730	60
Individual Study	1730	1900	90
Supper	1930	1950	20
Free Time	1950	2130	100
Evening Walk	2130	2150	20
Evening Inspection	2150	2200	10
Lights Out	2200		

A couple of explanations: "Listening to the latest news" is really a political talk. One of the seven training periods is also devoted to political training. The evening walk consists of marching on the parade ground by company.

Summary

The opposing forces soldier is well trained by any standard. He is trained under as realistic conditions as possible, substantially offsetting his lack of experience. He is well disciplined and has the best of modern equipment. He is young and somewhat immature, but is conditioned to subordinate himself to the collective will. The opposing forces soldier in battle can be expected to be a tough, callous opponent, indifferent to hardship. He is better educated, more sophisticated, and substantially better trained than his predecessor of World War II. He is a very formidable adversary.

Section 2—Small Arms Weapons

Infantry Weapons

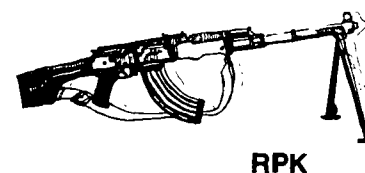
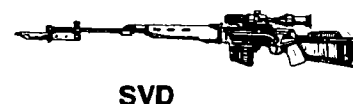
Opposing forces small arms are characterized by their relatively heavy weight and high reliability. Weight is less important to an infantryman carried in an armored fighting vehicle, thus opposing forces generally sacrifice weight for increased reliability. Emphasis is placed on simplicity of design for easy training, handling, and maintenance. Automatic weapons are generally shorter than US models to facilitate their use in AFV's.

The standard compact sidearm is the 9mm Makarov semi-automatic pistol (PM), which uses an eight-round magazine. The effective range of the 9mm is 50 meters.

The standard rifle in motorized rifle units is the 7.62mm AKM rifle, which comes in both a fixed woodstock and a folding metal stock version. The rifle can be automatic or semi-automatic. The AKM has a relatively short-sight length with open sights, and is essentially a short-range weapon (effective range 400 meters). The bayonet and scabbard combine to form a pair of wirecutters. The AKM with a 30-round magazine is replacing the older and heavier AK-47.

There is also a semi-automatic 7.62mm sniper's rifle (SVD) with an effective range of 800 meters and a 10-round magazine. A four-power telescope which is infrared sensitive, is optional with this rifle. The scope extends the range to 1,300 meters. Each opposing forces platoon has one sniper rifle.

The magazine-fed 7.62mm RPK light machinegun is an adaptation of the AKM assault rifle, equipped with a longer barrel, a folding bipod, and an altered butt stock. The maximum range is 2,500 meters, and the effective range is 800 meters. A box magazine has 40 rounds; a drum magazine has 75 rounds. A heavier and longer range machinegun (3,800



meters) is the 7.62mm PK. Its effective range is 1,000 meters. This weapon can be mounted on a folding bipod (PK) or on a tripod (PKS). The tripod mounting permits more effective and accurate fire at longer ranges. Belt capacity is 100 to 250 rounds. Heavier machineguns may be mounted on some AFV's for fire support to motorized rifle units.

The 7.62mm Goryunov heavy machinegun (SMG) is still used, but these older weapons are being phased out in favor of new machineguns such as the PK's. The new BMP has a PKT as the coaxial machinegun on its turret. Two other limited standard heavy machineguns are used: the 12.7mm Degtyarev-Shpozin (DSHK) heavy machinegun, effective range 1,500 meters for ground targets and 1,000 meters at air targets; and the Vladmirov (KPV) 14.5mm heavy machinegun, effective range 2,000 meters horizontal and 1,400 meters slant range. Both of these weapons are used in ground and air defense roles. The DShK armor penetration is 17 millimeters at 500 meters; the KPV armor penetration is 32 millimeters at 500 meters.

Each infantryman uses both fragmentation and antitank handgrenades. The most common antipersonnel frag grenades are the F-1, RGD-5, and RG-42. All have delay fuses of about 3 to 4 seconds with a fragmentation radius of 20 to 30 meters.

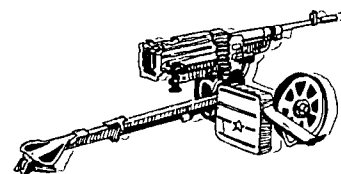
Antitank handgrenades, with shaped-charge explosives, have impact fuses. Another antitank grenade is the RKG-3M which has a HEAT warhead and an armor penetration of 125 millimeters. In handgrenades the "R" stands for "hand," the "G" for "grenade," and "P" for "antitank," although late models use "K" for shaped-charge. Shoulder-fired antitank grenade launchers are also referred to as RPG, which literally means "hand antitank grenade launcher."

RDG-1 or -2 smoke grenades are also available. The RDG-2 emits a dense white smoke approximately 20 meters long and 8 meters wide. In RDG-1 and RDG-2, "D" stands for "smoke."

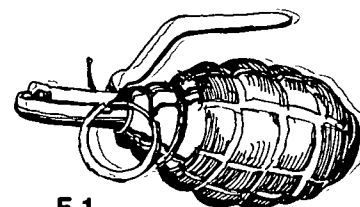
There are two basic types of flamethrowers in service. The cart-mounted TPO-50M is fixed on a two-wheel cart and requires a two-man crew. A newer, lightweight LPO-50 model is also in use. This is a manpack flamethrower with three upright cylinders and a bipod-mounted flamegun.

Section 3—Antitank Weapons

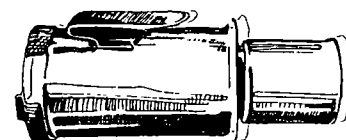
Antitank weapons are considered by opposing forces to be of prime importance in modern mechanized warfare. Opposing forces tactical doctrine of high-speed striking forces depends heavily on unobstructed movement of their tanks and AFV's.



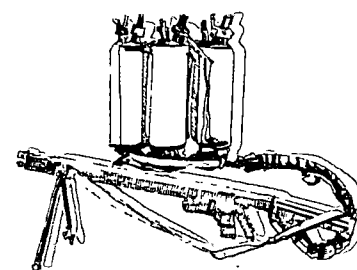
SMG



F-1



RKG-3M



LPO-50

Positions selected for all antitank fires are based upon their ability to provide:

- Protection by the terrain.
- Surprise direct fire on tanks and armor.
- Interlocking fire with other company weapons as well as those of adjacent units.

All weapons are dug in when possible. It is believed that one dug-in tank can combat two or three US tanks. A zone of interlocking antitank fire is organized directly in front of the line of contact.

All motorized rifle units down to squad are equipped with antitank weapons, the most standard being the RPG-7. The RPG-7 is a 40mm rocket-assisted reloadable grenade launcher which is shoulder-fired. The maximum range is 920+ meters, and the rate of fire is 4 to 6 rounds per minute. The RPG-7 fires an 85mm HEAT round which can penetrate 320 millimeters of armor. The maximum effective range for standing targets is 500 meters and 300 meters for moving targets. The RPG-7 has two handgrips, a large optical sight, and a flared cone on the end. There is one RPG-7 in each squad of the motorized rifle company.

Recoilless Gun

The current recoilless gun is the 73mm SPG-9, found in the motorized rifle battalion. The munition for the SPG-9 is related in design to that of the RPG-7. The weapon is man-portable with a perforated breech and fires a rocket projectile. The projectile can penetrate 400-millimeter armor. The effective range is 1,000 meters and the maximum range is 1,960 meters. The SPG-9 uses a crew of three. It is normally carried aboard a truck or armored fighting vehicle, and dismounted and placed on its tripod for firing.

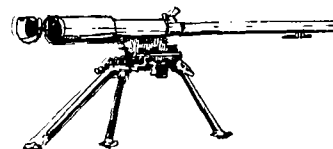
The smoothbore antitank gun T-12 is the newest 100mm gun, and is replacing the M1955 100mm field gun. It fires fin-stabilized nonrotating heat projectiles. The T-12 is frequently fitted with infrared night-sighting equipment. The T-12 has an effective range of 900 to 1,200 meters and a maximum indirect fire range of 8,500 meters. It is found in the antitank battalion of the motorized rifle division artillery. The T-12 has a crew of six men and a rate of fire of 10 pounds per minute. The weapon has a barrel length of 8,484 millimeters and an armor penetration of 406 millimeters.

Antitank Guided Missile

Control of antitank guided missiles is accomplished through a visual guidance system. This means that the range of fire depends on the distance to which the flight of the missile can be observed. The terrain must be open for the flight distance



RPG-7



SPG-9



T-12

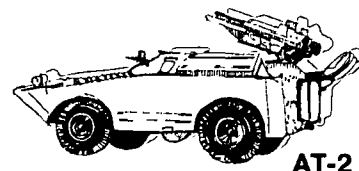
of the missile, and it should be open for at least 2 kilometers. Trees and shrubs may become obstacles, because if they are brushed by the missile, detonation may occur prematurely. Therefore, densely vegetated areas will be covered by tanks, antitank guns, and obstacles/mines.

The AT-2 SWATTER is a radio-guided antitank missile launched from a quad mount on a modified BRDM. The missile has a HEAT warhead and a range of 500 to 2,500 meters. The SWATTER B, an improved version, has a range of 3,500 meters. The SWATTER has a two-man crew and an armor penetration of 400+ millimeters.

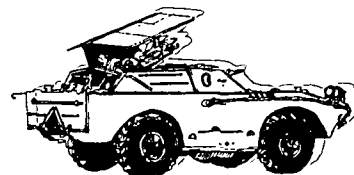
A recent antitank missile is the AT-3 SAGGER. This rather small missile (815mm) has a range of 500 to 3,000 meters, and an armor penetration of 400+ millimeters. The SAGGER has shown up in five different ground launch configurations: mounted on four vehicles, and a manpacked version. The AT-3 is mounted on a six-rail launcher on the BRDM and BRDM-2 and requires a gunner and a loader. The BMP and BMD have a single rail launcher and the gunner also acts as the loader. The antitank AT-2/3 mounted on the BRDM-2 is found in the antitank battery, motorized rifle regiment, and in the airborne division. The disadvantages of the AT-2/3 are the approximate 500 meters of dead space in front of the system and the requirement for the gunner to track both the target and missile simultaneously. The dead space disadvantage can be overcome by covering the dead space with the RPG-7 or by backing the AT-2/3 500 meters to the rear of the line of contact in the defense. The manpacked version uses a three-man team carrying a portable launcher, fire-control equipment, and four missiles. The team can set up four SAGGERS in less than 5 minutes. The manpacked version is organic to the antitank platoon of the motorized rifle battalion. When infantry squads or platoons receive the manpacked SAGGER, they pair it up with an RPG-7 so that the weapons systems mutually support each other. The SAGGER gunner can remotely fire the ground-mounted SAGGER from a distance of 15 meters and the BRDM-mounted SAGGER from a distance of 80 meters.

Assault/Antitank Gun

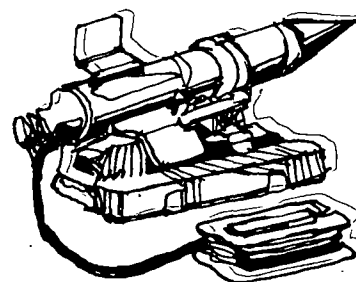
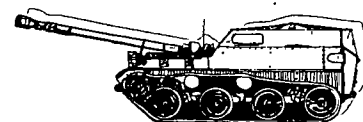
The opposing forces employ two self-propelled air-landable/droppable assault guns, the ASU-57 and ASU-85. The ASU-85 is in the assault gun battalion of airborne divisions and the ASU-57 is in airborne regiments. The ASU-57 has light armor protection, no roof over the three-man crew compartment, and limited traverse capabilities. The effective range of the ASU-57 is 1,150 to 1,220 meters with an armor penetration of 85 to 100 millimeters. The ASU-85, a fully armored antitank gun, has a chassis based on that of the PT76 tank, although



AT-2



AT-3

AT-3,
MANPACK

ASU-57

the ASU-85 is not amphibious. Similarities between the ASU-85 and the PT76 are noted in the type of suspension, the low silhouette, the sharply sloped glacis plate and the long, thin gun tipped with a double-baffle muzzle brake and bore evacuator. In addition, the ASU-85 mounts a large gunner's infrared searchlight above the mantlet and also carries a small commander's light. The ASU-85's effective range is 950 to 1,150 meters with an armor penetration of 102 millimeters.

The SU-100 is a medium assault gun and is still found in some antitank regiments. Its effective range is about 1,500 meters and it has a 380mm armor penetration. Its maximum range is 15,400 meters. The weapon uses a T-34 chassis and is the same basic weapon which was mounted on the original T-54 medium tank. Although developed during World War II, the SU-100 is relatively common today and is still a formidable weapon. Some SU-100's have been converted into tank recovery vehicles.

Section 4—Mortars and Artillery Pieces

Mortars

Most opposing forces mortars are difficult to turn rapidly over a wide traverse, but can accommodate small-angle shifts (up to 6 degrees) without shifting the bipod. Medium artillery and heavy artillery have a unit of fire that varies from 60 to 80 rounds. Lighter artillery may have a higher unit of fire. A unit of fire is an arbitrary amount of ammunition used by the opposing forces for accounting and planning purposes although it does have some relation to combat requirements. Ammunition is demanded by units, or allocated for an operation, in multiples of units of fire.

The 82mm M1937 mortar is a smoothbore, muzzle-loaded weapon with fixed firing pins for drop firing. The M1937 uses a conventional bipod and a circular baseplate. A five-man crew manpacks this weapon. The minimum range for the high explosive (HE) is 100 meters; maximum range is 3,040 meters.

The 120mm regimental mortar M1943 is the standard mortar in the mortar battery of the motorized rifle battalion. A battery has six tubes. This mortar is normally towed behind a truck or AFV. Although it is a smoothbore weapon, the 120mm mortar has a provision for trigger as well as drop firing. Minimum range is 460 meters and maximum range is 5,700 meters. The weapon has a six-man crew. The crew can fire 15 rounds per minute.

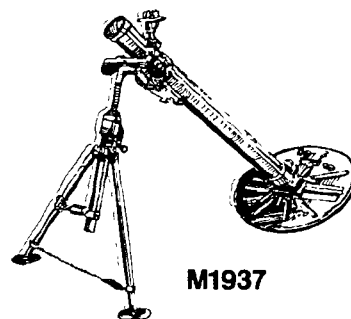
Several other mortars exist, but they are limited standard weapons. Examples are 160mm M1943, 160mm M160, and the 240mm M240.



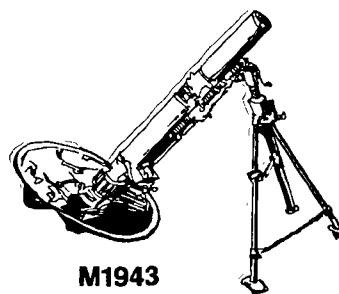
ASU-85



SU-100



M1937



M1943

Artillery Pieces

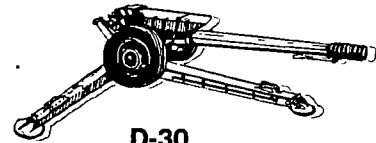
All guns up to 152 millimeters have an antitank capability, and 5 percent of their ammunition is antitank. The opposing forces have field artillery pieces which can fire nuclear and chemical as well as conventional shells.

The 122mm howitzer D-30 was introduced in the 1960's. This weapon is found in the howitzer battery of the motorized rifle regiment and in the artillery regiment of the motorized rifle, tank, and airborne divisions. It has a three-trail carriage which permits a 360-degree traverse. The weapon is towed muzzle first by a large lunetta just behind the muzzle brake. When the D-30 is placed in firing position, the crew lowers a central firing jack, the wheels are raised off the ground, and each of the two outer trails is spread 120 degrees into the firing position. Other distinctive features of the D-30 include a small shield, a recoil system above the tube, and a multi-baffle muzzle brake. This howitzer fires a variable-charge, case-type, separate-loading ammunition. Maximum range is 15,300 meters. Of great significance is the provision of a special nonrotating, fin-stabilized, HEAT projectile for the D-30. Direct fire HEAT range is 800 meters. A crew of seven mans the D-30. Maximum rate of fire is 6 to 8 rounds per minute. The 122mm also comes in a self-propelled (SP) version. It replaces the D-30 in motorized rifle and tank divisions.

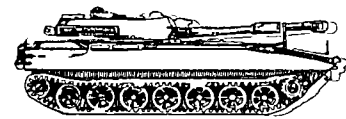
The 122mm gun D-74 may be assigned to units in lieu of the 122mm D-30 or it may be found in the heavy artillery brigade of the artillery division. Like the 122mm D-30, the D-74 is lifted off the ground by a circular baseplate and can be shifted in a 360-degree arc. The ammunition is variable-charge, case-type, designed for separate loading. Maximum range of the D-74 is 24,000 meters. Grazing fire range (against a 2-meter target) with armor piercing high explosive (APHE) is 1,070 meters. The D-74 has a crew of 10 men.

The 130mm field gun M-46 is organic to the artillery brigade of an artillery division. The recoil system has a hydraulic buffer and hydropneumatic recuperator. Large sponge-filled rubber tires are used on the carriage. The range is 27,000 meters, and the grazing fire range (against a 2-meter target) with APHE is 1,170 meters. A crew of nine mans the weapon. The maximum rate of fire is five rounds per minute.

The 152mm howitzer M1943 (D-1) is found in the division artillery of a motorized rifle division. The tube has a large double-baffle muzzle brake. Ammunition is of variable-charge, case-type, separate-loading design. Maximum range is 12,400 meters. Grazing fire range (against a 2-meter



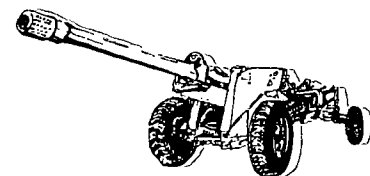
D-30



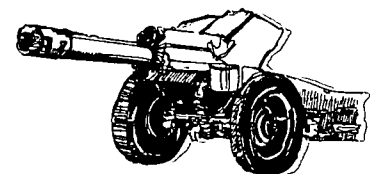
122mm SP



D-74



M-46



M1943 (D-1)

target) (semi-AP) is 510 meters. The D-1 has a crew of seven. Maximum rate of fire is three to four rounds per minute.

The 152mm gun-howitzer D-20 is organic to the artillery regiment of a tank or combined arms army (CAA) and to an artillery division. The D-20 is distinguished from the D-74 by its thicker tube and larger double-baffle muzzle brake. Ammunition is case-type, variable-charge, and separate-loading. Maximum range is 18,500 meters and the grazing fire range (APHE) (at a 2-meter target) is 850 meters. Maximum rate of fire is five rounds per minute. The crew is 10 and the armor penetration is 130 millimeters:

The 152mm SP gun-howitzer may be issued to the motorized rifle division in lieu of the towed version as well as to artillery divisions and brigades.

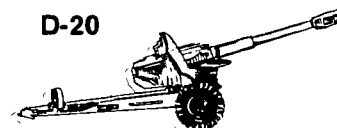
The 180mm gun S-23 may be organic to the heavy artillery brigade of an artillery division. The 180mm S-23 is the largest artillery piece on a towed mount. In addition to firing conventional high-explosive and concrete piercing projectiles, the S-23 may have the capability for firing nuclear warheads. This weapon has a carriage with box-section split trails and large dual tires filled with sponge rubber. The maximum range is 30,000 meters. The S-23 has a screwtype breechlock and is fitted with a multiperforated muzzle brake. The ammunition is of the bag-type variable-charge, separate-loading variety. The normal prime mover on the S-23 is a heavy-tracked artillery tractor.

Section 5—Tactical Artillery Missiles and Multiple Rocket Launchers

Multiple Rocket Launchers (MRL)

Massive rocket barrages are a significant part of the opposing forces artillery attack. The opposing forces multiple-tube rocket launchers are mounted on trailers or trucks. Each launcher has from 4 to 40 tubes. Artillery rockets can deliver heavy explosive power over a very short sector in a short period of time, but they are usually not placed in direct support of maneuver elements.

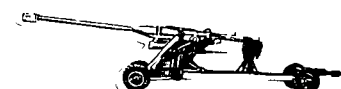
The 122mm rocket launcher (40-round) BM-21 is organic to the MRL battalion of the tank and motorized rifle division. The BM-21 can fire a 40-round salvo in 20 seconds. The 122mm rockets are primarily fin-stabilized, although they have a relatively slow spin. The BM-21 can be distinguished easily from other MRL's by its use of the Ural-375 truck and the 40-round launching apparatus. This weapon comes in a long- and



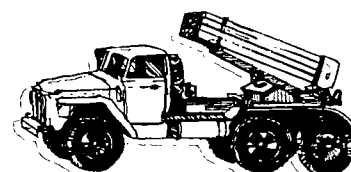
D-20



152mm SP



S-23



BM-21

short-rocket configuration. Maximum range of the long rocket is 20,500 meters; short-range rocket is 11,000 meters. A six-man crew can unload the launcher in 10 minutes. The Ural-375 has a cruising range of 405 kilometers.

The 140mm RPU-14 (16-round) rocket launcher is organic to division artillery of the airborne division. Maximum range of the RPU-14 is 9,810 meters. The crew is five, and reload time is 4 minutes.

Several other opposing forces MRL's exist, but they are limited standard and are seldom encountered. Examples are the 200mm four-round BMD-20, and 250mm six-round BM-25, and the 240, 12-round BM-24 and 24T.

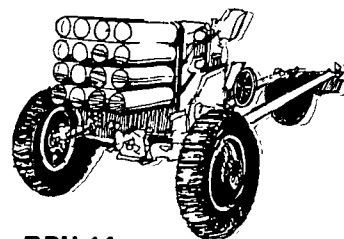
Free Rockets and Tactical Artillery Missiles

Surface-to-surface tactical ballistic missiles comprise an integral part of the opposing forces artillery. These missiles can deliver conventional, nuclear, or chemical munitions. The opposing forces ground forces have SCALEBOARD medium-range tactical missiles and shorter-range SCUD missiles, both of which are carried on large tracked or wheeled vehicle-launchers. Free rocket over ground (FROG) tactical unguided missiles are organic to tank and motorized rifle divisions, while SCUD and SCALEBOARD are assigned to fronts or armies. FROG launchers are deployed in batteries of two launchers each, with two firing batteries per FROG battalion.

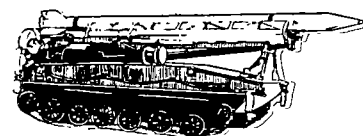
The FROG-5 is transported on and launched from a track chassis based on the PT76. The missile is solid propellant and three warheads are available: HE, nuclear, and chemical. The FROG-5 is a fin-stabilized unguided rocket. Its range is from 15 to 35 kilometers. The FROG-5 is being replaced by the FROG-7.

The FROG-7 is transported and fired from a ZIL-135 (8 x 8) truck. This missile has an increased range of 70 kilometers. The transporter has its own onboard crane for rocket handling. Three resupply missiles are carried on ZIL-135 wheeled vehicles. Warheads are HE, nuclear, or chemical. The FROG-7 is associated with both END TRAY and BREAD BIN radars.

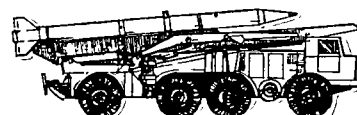
The SS-1C, SCUD-B (surface-to-surface, liquid-fueled guided missile), first appeared on a Josef Stalin heavy-tracked chassis. This vehicle acts as an erector and launcher for the missile. In recent years the SCUD-B has appeared on a newer transporter-erector-launcher, the MAZ-543 (8 x 8) truck. The use of this new powerful cross-country wheeled vehicle gives this missile better road mobility and reduces the number of vehicles involved. The range of the SCUD-B is 280



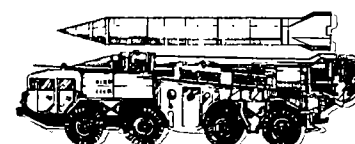
RPU-14



FROG-5



FROG-7



SCUD-B

kilometers. The meteorological (met) radar is probably the END TRAY. The SCUD-B is found in the SCUD brigade of the CAA and tank army and at front level.

The SS-12, SCALEBOARD, is a mobile, long-range guided missile system found only at front level. It uses the same chassis as the SCUD-B. Its range is 800 kilometers. This missile is associated with the END TRAY radar and large crane and pole trailers. The missile uses liquid propellant and has a nuclear warhead.

Section 6—Air Defense Weapons

Antiaircraft Guns

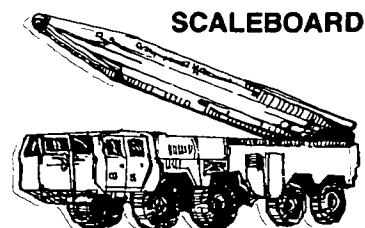
Antiaircraft support is provided for all operations in the opposing ground forces. Antiaircraft guns and surface-to-air missiles provide fire support and air defense for ground units. Individual antiaircraft machineguns such as those mounted on tanks comprise a significant part of the opposing forces arsenal of air defense weapons.

The ZU-23 light twin-barreled 23mm towed automatic antiaircraft gun is a limited standard weapon and is standard equipment in the airborne divisions. The ZU-23 is a fully automatic, gas-operated weapon with an effective range of 2,500 meters. It has a pointblank range of 900 meters. The weapon has a crew of five, a rate of fire of 2,000 rounds per minute, and a 25mm armor penetration. The system uses an optical fire-control system.

The ZSU-23-4 (SP) is a quad liquid-cooled version of the ZU-23. It uses a GUN DISH radar for fire-control purposes along with optical sights. The ZSU-23-4 is found in the motorized rifle and tank regiment air defense battery. The range is 3,000 meters with the radar and 2,500 meters using optical sights. The crew is four, and the rate of fire is up to 4,000 rounds per minute.

The ZSU-57-2 is a limited standard antiaircraft weapon that may be encountered in the air defense battery of the tank regiment. It has twin 57mm guns on a tracked armored vehicle. The ZSU-57-2 is well suited to attack armored vehicles as well as low-flying aircraft. The effective range is 4,000 meters. The armor penetration is 106 millimeters. It has a crew of seven, and the rate of fire is 240 rounds per minute.

The S-60 57mm antiaircraft gun (SP) is the towed version of the 57mm antiaircraft gun and is a limited standard weapon in divisional antiaircraft regiments being replaced by the SA-8 or SA-6. Its range is 6,000 meters. Armor penetration is 106



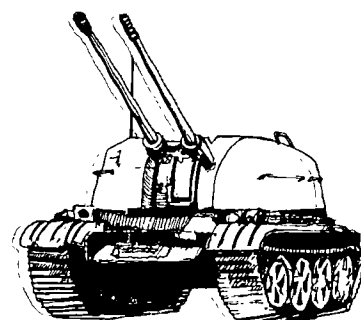
SCALEBOARD



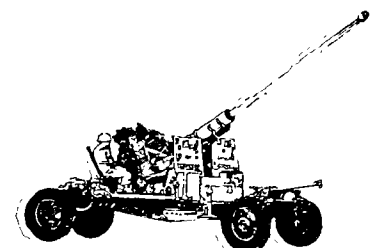
ZU-23



ZSU-23-4



ZSU-57-2



S-60

millimeters. The off-carriage fire-control radar is the FLAP WHEEL or FIRE CAN. The rate of fire of the S-60 is 120 rounds per minute.

Surface-to-Air Guided Missiles (SAM)

Surface-to-air missiles are held by independent anti-aircraft missile units attached to a front, army, division or regiment.

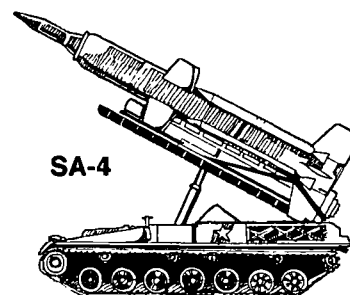
The SA-4, GANEF, is a SAM (medium/high altitude) with ramjet propulsion. The missiles are liquid-fuel cruise-type with four wraparound solid-propellant boosters. The missile system is transported and fired from a twin-round tracked launch vehicle which is itself air-transportable in the AN-22 military freighter. The slant range of the SA-4 is 70 kilometers with an effective ceiling of 24 kilometers. The missile control radar is the PAT HAND. This missile carries an HE proximity fuse warhead.

The SA-6, GAINFUL, is a low/medium altitude SAM. Three missiles are carried and launched from a special tracked vehicle which uses components of the ZSU-23-4 chassis. The SA-6 was designed to complement the SA-4 system in defending the army against air attack, and it is found in the same units as is the SA-4. Slant range of the SA-6 is 30 kilometers with an effective ceiling of 17.7 kilometers. The STRAIGHT FLUSH radar is the missile control. The SA-6 rate of fire is one to three missiles in ripple fire.

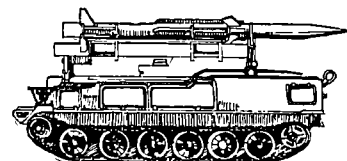
The SA-7, GRAIL, a low-altitude shoulder-fired SAM, has passive infrared homing guidance and an HE warhead. It is found in the motorized rifle and medium tank companies, and used against low-flying fixed and rotary wing aircraft. Its maximum slant range is 3.5 kilometers with an effective ceiling of about 3 kilometers. The GRAIL's rate of fire is one missile per target.

The SA-8, the newest of the SAM's, is a short-range all-weather missile with conventional configuration. Four missiles, each about 3 meters long, are carried in an integrated mount. Fire-control equipment and quadruple launchers are mounted on a rotating turret, carried by a new 3-axle, 6-wheel vehicle that appears to be amphibious. Surveillance radar with an estimated range of 30 kilometers, folds down behind the launcher, enabling the weapon system to be airlifted by transport aircraft. The tracking radar is of the pulse type, with an estimated range of 20 kilometers.

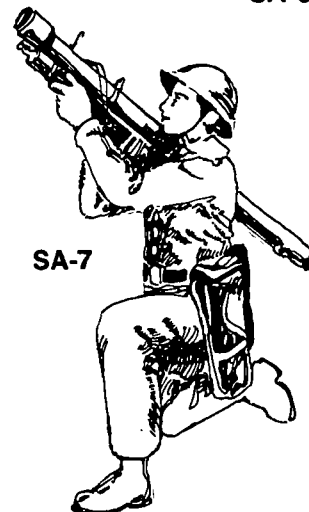
The SA-9, GASKIN, is a fully mobile self-contained battle-field low-altitude air defense system. Its transporter-erector-launcher (TEL) is a modified BRDM-2 chassis mounting four missiles. The GASKIN is found primarily in the motorized rifle regiment and the tank regiment air defense battery. The



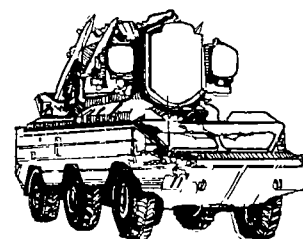
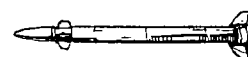
SA-4



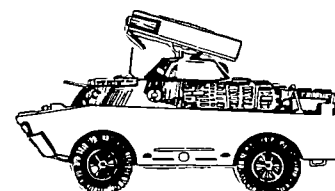
SA-6



SA-7



SA-8



SA-9

slant range of the SA-9 is estimated at about 7 kilometers, and the effective ceiling is approximately 3 kilometers. The SA-9 uses an infrared homing guidance system, and has a rate of fire of one to four missiles per target.

Section 7—Armored Fighting Vehicles

General

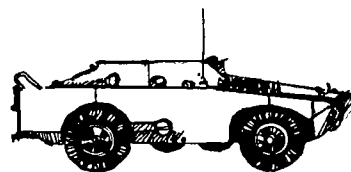
The opposing forces require their equipment to be relatively simple to maintain, repair, and operate. Their doctrine precludes long battlefield repairs, and these are not undertaken. Their conscript soldiers need to spend as much time as possible on equipment training to become effective soldiers early in their 2 years of service. Good battlefield mobility is required for AFV's as well as combat support vehicles. New equipment is regularly introduced with constant emphasis on improved mobility and firepower. The opposing forces stress the tactics of speed, surprise, and mobility with their AFV's.

Amphibious Wheeled Reconnaissance Vehicles

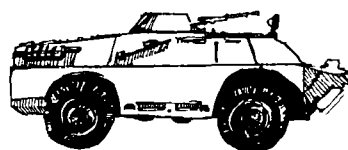
The amphibious scout car BRDM and BRDM-2 comes in several versions. It is a 4-wheel drive, light reconnaissance vehicle with full armored cover. Four versions of the BRDM exist; the basic BRDM reconnaissance vehicle; the BRDM-rhk radiological-chemical reconnaissance vehicle; the BRDM-U command vehicle, distinguished by extra radio antennas; and three antitank models with AT-2 SWATTER and AT-3 SAGGER antitank missiles. The BRDM-2 has a better powerplant and a small 14.5mm machinegun turret. The BRDM-2 can reach speeds of 95 kilometers per hour (kmph) with a cruising range of 750 kilometers. The BRDM can have a crew of from two to five men depending on the model and the mission. All reconnaissance vehicles are fitted with night-vision devices.

Amphibious Wheeled Armored Fighting Vehicles

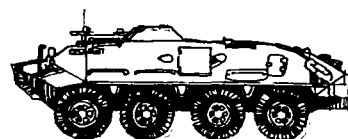
The 8-wheel drive BTR-60P is an infantry squad fighting vehicle which comes in four other versions: BTR-60PA, BTR-60PB, BTR-60PU (command vehicle) and forward air control vehicle (modified BTR-60PB). It has a two-man crew and, depending on the model, carries 14 to 16 men. The BTR-60P has a large boat-like hull, well-sloped armor, and a rear-mounted powerplant. The BTR-60P's land speed is 80 kmph, with a cruising range of 500 kilometers. The BTR-60PB has overhead protection, fireports, and a turret-



BRDM



BRDM-2



BTR-60PB

mounted 14.5mm machinegun firing HE, armor piercing (AP), and armor piercing incendiary (API) ammunition to a maximum range of 1,500 meters. The armor penetration at 500 meters is 32 millimeters. There is also a 7.62mm coaxial machinegun.

Amphibious Tracked Armored Fighting Vehicles

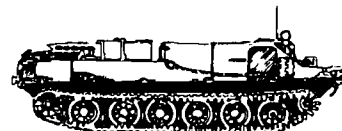
The BTR-50PK is a covered limited standard infantry squad fighting vehicle. This vehicle carries 22 personnel. It has a land speed of 44 kmph and a cruising range of 240 kilometers.

The BMP is the standard infantry squad vehicle found in the motorized rifle battalion. This lightly-armored vehicle combines the features of a light tank, antitank guided missile carrier, and AFV. The BMP has a crew of three and carries eight men. The main armament includes a 73mm smoothbore gun and a 7.62mm PKT machinegun supplemented by an AT-3 SAGGER. A unique feature of this vehicle is four firing ports on each side and one in a rear door. Thus, troops can ride into battle, armor protected, firing their weapons. The large rear doors, which also serve as fuel cells, permit the occupying soldiers to disembark quickly. The road speed is 60 kmph and cruising range is 500 kilometers. The BMP is equipped with an infrared searchlight, a periscope for night operations, and a capability to make its own smokescreen by injecting fuel into the exhaust system. The vehicle also has its own chemical, biological, and radiological (CBR) filtering system which allows its occupants to operate regardless of the outside environment.

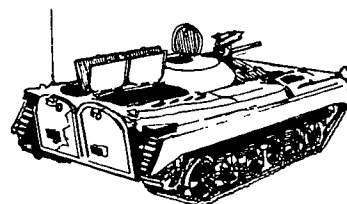
The BMD airborne combat vehicle is lightly armored like the BMP, but is smaller. It is air-droppable. The main armament is a 73mm gun, two 7.62mm machineguns and SAGGER missiles. Its road speed is 60 kmph and cruising range is 300 kilometers.

Tanks

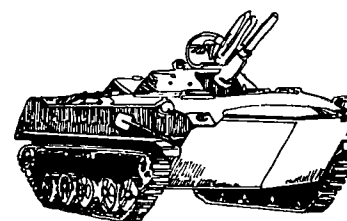
Tanks are the backbone of the opposing forces. It is a common opposing forces practice to lead with armor, particularly on a main axis of attack. All tanks have improved vision devices. Fire and movement are not usually practiced within the tank platoon, but within companies one platoon may be detailed to provide covering fire while the other two move to attack a flank. Opposing forces tanks can deep-wade up to a depth of 1.6 meters, and snorkel equipment is available as a unique feature of their medium tanks. Preparation for snorkeling takes about 15 minutes. Water obstacles up to 5.5 meters maximum depth can be forded with snorkels.



BTR-50PK



BMP



BMD

The PT-76 is a light amphibious tank which is the standard opposing forces reconnaissance tank. (The basic PT-76 chassis is also used on the BTR-50, ZSU-23-4, ASU-85 airborne assault gun, and for FROG-5 transport-launching vehicles.) Its amphibious characteristics include a twin waterjet propulsion system. The main armament is a 76mm gun with an effective range of about 650 meters. Its land speed is 40 kmph and its cruising range is 260 kilometers.

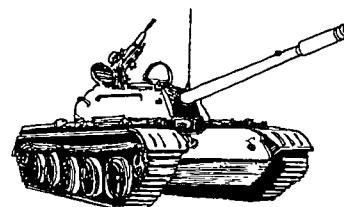
The T-54/55 medium tanks come in many versions. The main armament is the 100mm gun with an effective range of approximately 1,000 meters. A coaxial 7.62mm machinegun and a secondary 12.7mm antiaircraft machinegun for the T-55 completes the weapons. The crew is four men. The T-55 is approximately 1 meter shorter in height than the US M-60 tank. The cruising ranges are 400 and 500 kilometers, respectively, and the speed of both tanks is 48 kmph. The T-55 is fitted with infrared searchlights, and two-plane stabilization for the main gun.

The T-62 medium tank appeared in 1965. It has been widely issued to opposing forces units and is a standard main battle tank along with the T-55. The T-62 has two separate searchlights, one for the tank command and one for the gunner. It has the same snorkeling equipment as the T-54/55. The most significant feature of the tank is the 115mm smoothbore gun firing fin-stabilized SABOT rounds that are the fastest in the world with a muzzle velocity of 1,500 meters per second. The effective range of the main gun is approximately 1,500 meters. It also has an automatic ejection system that is designed so that the expended main gun round is flipped out of the turret through a door located in the rear. The longer, heavier ammunition of the T-62 must be loaded left-handed resulting in an average loading time of 7 seconds. A second version of the T-62 appeared in 1970. This tank, the T-62A, has a 12.7mm antiaircraft machinegun on the loader's hatch. It has a smokescreen capability that is provided by injecting diesel fuel directly into the exhaust manifold on the left side of the vehicle. The T-62 has a Stadia reticule sight that uses the height of the target to estimate range. Forty rounds of ammunition are carried for the main gun. The T-62 has a crew of four, travels at 48 kmph, and has a cruising range of 450 kilometers.

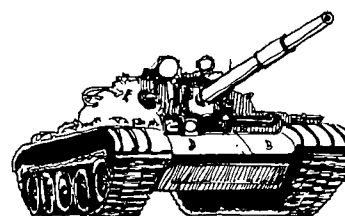
The newest opposing forces tank is the T-72 medium tank. The T-72 features a new hull, turret, and suspension system while retaining the characteristic low silhouette of previous tanks. The tank is believed to be equipped with a 122mm smoothbore main gun, a new fire control system with a possible laser range-finder, and an automatic loader, permitting a reduction of the tank crew from four to three personnel.



PT-76



T-54/55



T-62

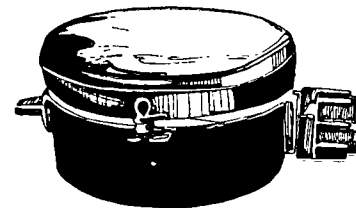


T-72

The T-72 has been in production since about 1974 and approximately 2,000 have been produced.

Section 8—Landmines

Most opposing forces landmines are either antitank or antipersonnel types which are activated by MUV tripwire or MV-5 pressure-detonated fuses. Controlled mines (electrical, timed, or frequency induction) may be used to block lanes left in minefields, or to close up gaps in their own defensive positions through which opposing forces troops must pass. There is a variety of special purpose mines, such as magnetic, delayed-action, vibratory, and unextractable-fuse models, which are used to cover withdrawal movements or to harass the US force's rear. Most landmines are in the standard metal cylinder form, but wooden boxes and cardboard cylinders that can be constructed in the field are also employed.



**ANTIPERSONNEL
MINE PMN**



Chapter 2

BASIC TACTICAL DOCTRINE

TABLE OF CONTENTS

Section 1

General	2-1
Force Development	2-1
Nature of Combat	2-1
Doctrine for Employment of Combat Arms	2-5
Tactical Principles	2-8

Section 2

The Offense	2-11
Types of Offensive Action ...	2-11
Meeting Engagement	2-11
The Breakthrough ..	2-12
Pursuit	2-13
Basic Maneuvers	2-13
Changing Doctrine ..	2-17
Summary of the Offense	2-17

Section 3

The Defense	2-18
General	2-18
Defensive Doctrine	2-19
Planning the Defense	2-19
Organization of the Defense	2-19
Antitank Defense	2-22
Employment of Mines and Obstacles	2-23

Section 4

Retrograde Operations	2-23
General	2-23
The Delaying Action	2-24
Withdrawal	2-24
Retirement	2-25

Section 5

Intelligence Indicators	2-26
Use of Intelligence Indicators	2-26
Attack or a Tactical Cover and Deception Operation that May Accompany an Attack May Be Indicated by:	2-26
Defense May Be Indicated by:	2-29
Reinforcement May Be Indicated by:	2-30
Delaying Action May Be Indicated by:	2-30
Withdrawal May Be Indicated by:	2-31
Presence and Use of Nuclear Weapons May Be Indicated by:	2-31

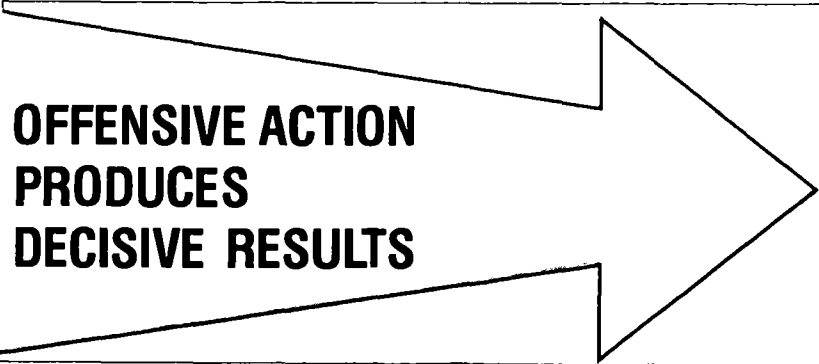
Section 1—General

Force Development

Opposing ground forces have the capability to fight over the whole spectrum of warfare from limited conventional operations to all-out nuclear war. *Opposing forces have developed a modern, highly mobile and well-balanced fighting force to meet the requirements of the modern nuclear battlefield and to fight conventionally as well.* Opposing forces strongly believe that the outcome of any future conflict can be decided only by the combined efforts of all components of the armed forces. Opposing forces have organized their ground forces for combat flexibility. This flexibility extends to their tactical doctrine as well.

Nature of Combat

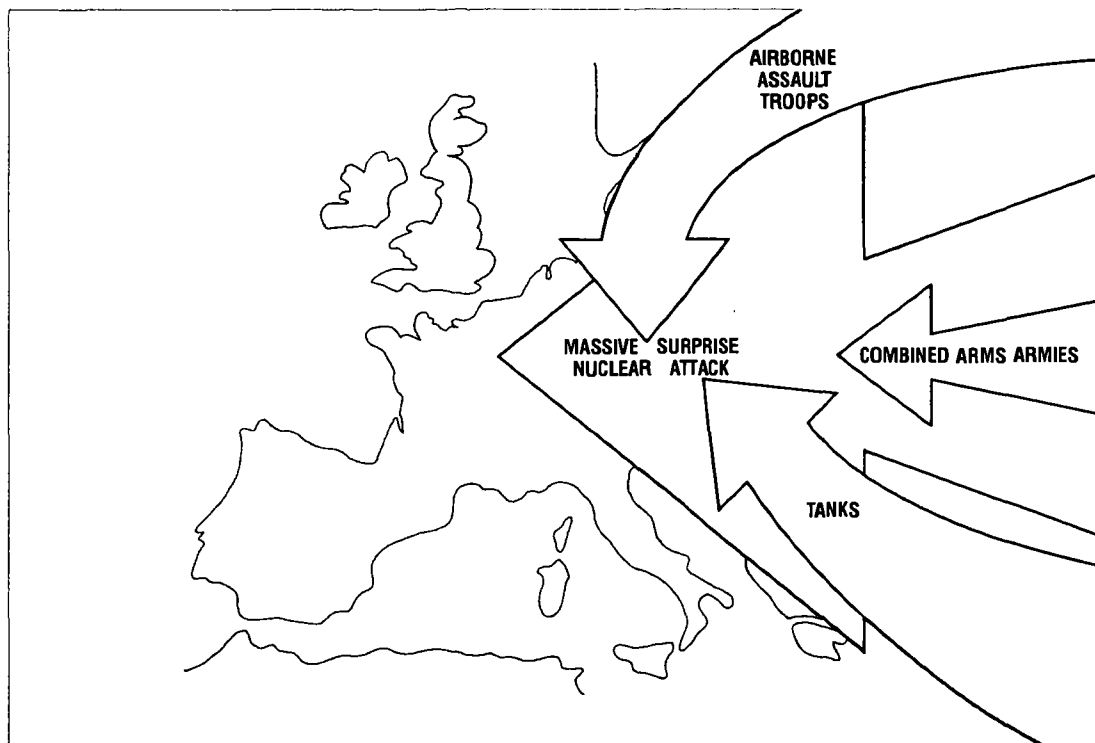
Relationship of Offensive and Defensive Action. *The pre-dominant tenet of opposing forces tactical doctrine is that decisive results are achieved only through offensive action.* However, the opposing forces recognize defense as a necessary form of combat which, at times, might be profitably used to gain time while waiting for the opportunity to resume offensive action, or to economize forces in one area while concentrating in another. When circumstances and friendly action compel the opposing forces commander to assume a



**OFFENSIVE ACTION
PRODUCES
DECISIVE RESULTS**

defensive posture, he is expected to seize the initiative and resume the offensive at the earliest possible moment.

Nuclear Operations. Opposing forces strategy toward Europe is offensive in nature, designed to destroy US troop concentrations and create gaps in US defenses. The attack will begin with a surprise conventional attack by tanks, combined arms armies, with airborne/airmobile assault troops. It will take on great spatial size because of the decisiveness of the goals and the impact of the initial blow. It will be conducted night and day, in any weather, without letup until the US and its allies are defeated. While the opposing forces plan for the war to begin with conventional weapons, they are prepared to escalate it to a nuclear conflict if they are unable to achieve their goals or if the defending forces use nuclear weapons. If escalation does come about, it will be sudden, massive, and most likely decisive.



Chemical Operations. There is no evidence that the opposing forces have any constraints on the use of chemical weapons. They are the best trained army in the world in chemical warfare. Chemical, biological, flame, and smoke operations are covered in section 8, chapter 14.

Standard Tactical Procedure. *Briefly, the important thing to know is that the opposing forces usually attack in echelons.* The second echelon follows the first up to 10 kilometers. Standard procedure, when advancing, is to bypass or envelop strongly held points or areas. These bypassed strongpoints are reduced by following echelons of forces which are specifically assigned such missions. Opposing forces use breakthrough tactics only when a strongly defended area has no readily assailable flanks. The breakthrough tactics are tailored to destroy resistance in a small zone or area, to rupture the defense and create a gap which can be exploited by armor heavy forces.

Momentum of the Attack. The opposing forces emphasize surprise and speed in overcoming natural and manmade obstacles, such as rivers or built-up areas, to maintain the momentum of the attack and to avoid presenting lucrative targets for nuclear weapons. Opposing forces attempt to cross water barriers in stride, without interrupting the momentum of advance by halting for a buildup. Where heavy defenses require a concentration of force, the opposing forces minimize the presentation of a target by rapid assembly from dispersal areas for a surprise assault at a point of main effort and continue the advance on a broad front after US defenses are breached. Opposing forces commanders assemble for the task the amount of force they estimate will give them a high probability of success, usually at least a 3 to 1 ratio of infantry, 5 or 6 to 1 in tanks, and upward of 10 to 1 artillery over US forces at the point where a decision is desired.

Ratio of High Probability of Success

	OPPOSING FORCES	US
INFANTRY		
TANKS		
ARTILLERY		

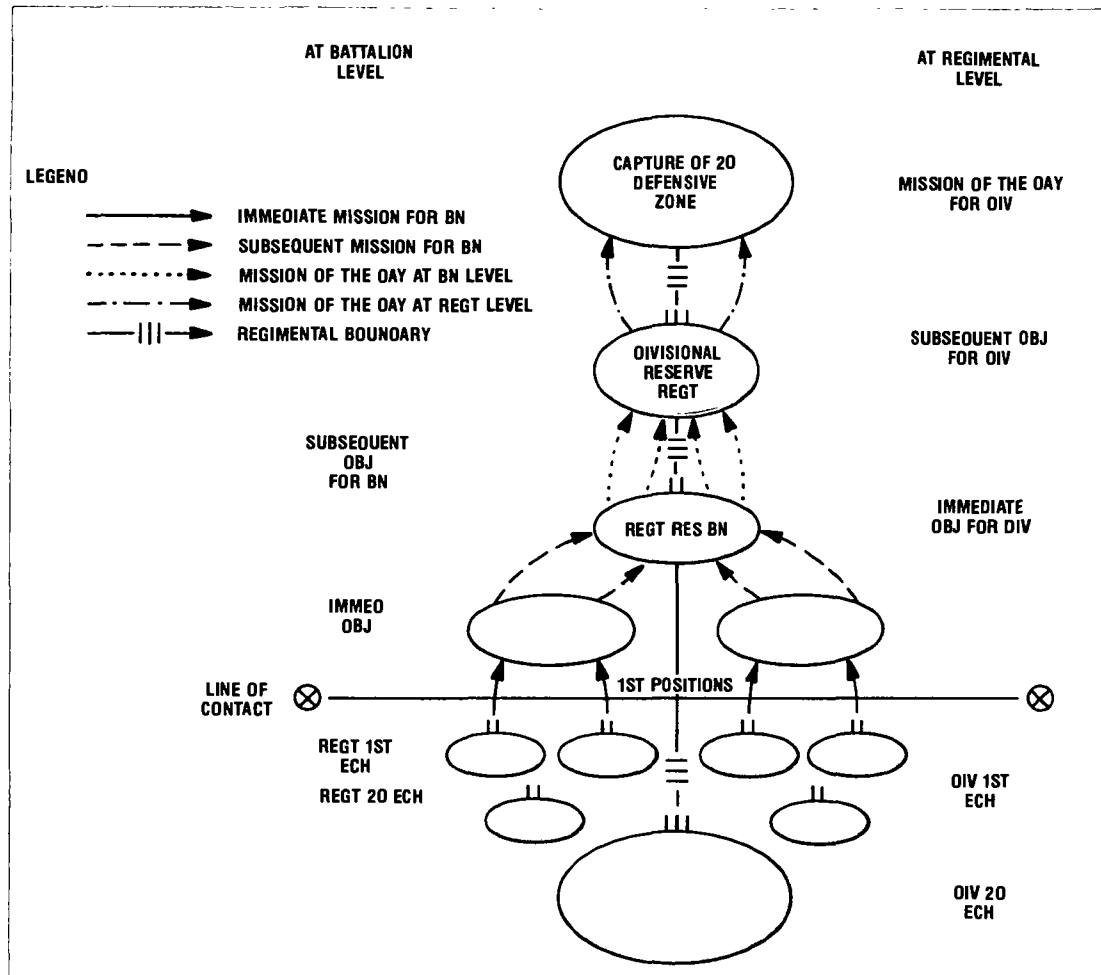
Objectives. *The primary tasks to be accomplished by opposing forces commanders are the destruction of US forces and the continuation of the advance in accordance with higher headquarters planning directives.*

Opposing forces do not rely heavily upon the seizure and consolidation of key terrain. This is evident from the doctrine for their offensive operations. In the meeting engagement, opposing forces attempt to disorganize and divide the enemy and then destroy the divided forces. The deliberate attack (breakthrough) places primary emphasis on rupturing initial defensive position to permit the passage of exploitation forces, thereby maintaining maximum offensive momentum. In a pursuit opposing forces attempt to outdistance retreating US columns, cut the columns into segments, and destroy them piecemeal.

Each echelon is given initial, subsequent, and final objectives when it receives the mission of the day. Normally, the subsequent objective of one echelon is the immediate objective of the next higher echelon. For example, the subsequent objective of an opposing forces battalion—the destruction of reserve forces intended for forward defensive positions—is also the immediate objective of the opposing forces regiment.

The objectives are to be considered as guidance only. If the opposing forces unit commander succeeds in attaining his sequential objectives, he is obligated to

continue the advance. *Opposing forces doctrine calls for continued aggressive pursuit of US forces until these forces are destroyed, the pursuing unit outruns its logistical support or is overextended and in danger of being cut off, or when the retreating force succeeds in establishing a strong defensive position.*



Line of Contact/Main Battle Area. Because of the speed and area covered by opposing forces, attack locations of both attacking and defending forces will be difficult to determine. Traditional lines, such as FEBA's, or objectives, will not exist. Instead, the opposing forces will consider the overall area of the attack as the main battle area and the areas where forces are engaged as lines of contact. Only if the attack is halted and the opposing forces go on the defense will the area stabilize to the point that a FEBA could be determined.

Surprise. Commanders are expected to seize every opportunity to strike when, where, and in such a manner as to catch the opposing side unprepared. *It is not essential, the opposing forces feel, for the US force to be taken completely unaware, but only that it become aware too late to react effectively.*

Opposing forces believe that the introduction of nuclear weapons has made surprise decisive in contemporary combat operations. Although new developments in combat surveillance techniques and equipment have done much to provide a commander with the means to avert surprise, an able commander with

ingenuity and cunning can achieve surprise. In general, the basic method for achieving surprise hinges on employing techniques and procedures which are either unfamiliar to the enemy or unanticipated in the development of a particular combat situation. More specifically, measures by which opposing forces commanders expect to achieve surprise include:

- Maintenance of secrecy in operational planning.
- Rapid concentration of superior forces and weapons in a sector of main effort (mass).
- Extensive use of night operations.
- Choice of the most favorable time and place for launching the attack.
- Speed of maneuver in developing an attack into the depths of an enemy defense.
- Introduction of weapons and equipment which are unfamiliar to the US.
- Adoption of deceptive measures.
- Timely and aggressive exploitation of enemy weakness and mistakes.
- Unexpected employment of nuclear weapons, airstrikes, and conventional artillery fires.

Cover and Deception. Opposing forces doctrine calls for consideration of the use of cover and deception (C&D) in every situation and every level of command when it is to their advantage. Reliance is placed on C&D as a means of economy of force, to concentrate combat power for the attack, and to cause a weakening of opposing firepower, maneuver units, and observation. Methods of cover include extensive use of camouflage and smoke. Preferred methods of deception include electronic, visual, and sonic. C&D is coupled with emphasis on speed and surprise by maintaining security to conceal the timing, weight, and direction of their attacks. The opposing forces make full use of their excellent night-fighting capability coupled with strict communication discipline, and deception and by rapid movement from assembly positions to attack formations. Night attacks are carefully planned and rehearsed. The opposing forces C & D efforts are enhanced by their extensive training in these concepts. After using security to create a favorable situation for deception, the opposing forces expend a great deal of time and effort to distract attention from their real intentions so that the adversary will take the wrong action or will take no action at all.

COVER

- CAMOUFLAGE
- SMOKE
- NIGHT FIGHTING
- STRICT COMMUNICATION
- DISCIPLINE

DECEPTION

- ELECTRONIC
- VISUAL
- SONIC
- SPEED AND SURPRISE
- COUNTERINTELLIGENCE

Doctrine for Employment of Combat Arms

Combined Arms. *Successful opposing forces military operations depend on the integrated combat employment of all branches. The basic tactical unit for sustained operation is the motorized rifle division, an integrated combined arms team of motorized rifle elements, tank elements, and artillery, supported by other services.*

Nuclear weapons, aircraft, and attached artillery augment the motorized rifle division's firepower, and the tank forces provide maneuver, massive direct fires and shock action by momentum. Opposing forces do not have a separate air force;

it is part of their army. Thus, the army commander controls tactical air for close support and reconnaissance.

Opposing forces units may be employed with reinforcements or attachments. The opposing forces use an offensive concept of first and second echelon and a small reserve. Attachments are made as required; i.e., tank units to motorized rifle units, motorized rifle units to tank units, etc. The mission, opponent, terrain, and forces available determine the amount and type of reinforcements or attachments.

Motorized Rifle Troops (Infantry). *The motorized rifle troops are considered by the opposing forces to be the basic and most versatile component of their armed forces.* Doctrine considers motorized rifle troops to be capable of employment under any condition of climate or terrain at any time. The opposing forces do not feel that nuclear warfare has diminished the significance of the infantry's role. This arm is completely motorized (mechanized) to achieve mobility, and its firepower, antitank, antiaircraft, and communications capabilities have simultaneously been improved.

Contrary to popular belief, the opposing forces do not employ infantry in "human sea" tactics. Motorized rifle units are seldom employed without strong combined arms teams of artillery, tank, and engineer support. Critical missions for motorized rifle units of the combined arms team are destruction of the US forces, seizing key objectives in the offense, and defending key areas in the defense.

Armor. Armor is employed both in small groups, for direct support of infantry, and in large formations such as the tank army. Armor is found at all tactical echelons and is used in cooperation with other arms.

Exploitation is the principal role of opposing forces armor. In the offense armor is often employed in mass, supported by nuclear weapons to seize deep objectives. Tank units attempt to seize such objectives before the US force is able to reorganize for the defense or counterattack.

In the defense, armor is normally held in reserve to be used in counterattacks to destroy US penetrations so that the opposing forces may resume the offensive.

Tanks may be used in both direct and indirect fire roles. Tank versus tank combat is an acceptable tenet of opposing forces doctrine, especially in the defense.

Artillery. Artillery is a major component of the combined arms team and is deployed in support of all tactical echelons. Opposing forces artillery provides conventional as well as nuclear fire support to the ground forces. Employed in large numbers, with few exceptions, all opposing forces offensives include an extensive artillery preparation. NOTE: Opposing forces classify mortars above 120mm and all MRL as artillery.

Opposing forces artillery fire support is characterized by a tendency to saturate areas with massive barrages intended to insure that no likely target escapes their fire. Doctrinally, they employ the concept of "fire strike" which is a severe and intense bombardment by all artillery weapons to defeat the US force without the use of ground troops. Direct fire is extensively used on targets of opportunity, on fortifications, and to support motorized rifle and tank attacks. Opposing forces

doctrine has recently changed to the extent that it no longer masses weapons hub-to-hub, but achieves mass fire effects through better fire direction procedures and improved weapons.

In the offense artillery frequently covers the advance by continuously laying a heavy volume of fire in front of the assaulting echelons. In the defense the US forces are taken under fire at extreme ranges and are held under increasingly heavy volumes of fire as they approach the defensive belts.

For the most part opposing forces employ air defense artillery (ADA) in its intended role, but have been known to use ADA weapons in a direct fire role to support infantry and tanks. The opposing forces consider antitank missiles as the most efficient means to combat tanks. Antitank artillery is employed as field artillery when no immediate tank threat exists. Normally, a portion of the anti-tank weapons is held in reserve for repelling unexpected tank attacks.

Unit Structure. Opposing forces maneuver units are designed to facilitate the concepts of mass and maneuver. Organically, each unit is a combined arms team heavily weighted with tanks, artillery, and automatic weapons to provide increased firepower. The unit structure is designed to be adapted readily to changing combat requirements by the attachment of large numbers of supporting units, including artillery, tanks, engineers, and chemical troops. The unit can also be divided into task groupings as required to provide the violent shock action and overwhelming mass of fire necessary to destroy the US force. Opposing forces tactical transportation is suitable for battlefield maneuver which supports their tactical concepts. Civilian vehicles also are capable of being converted to combat use in times of war.

Echelons and Reserves. Opposing forces commanders normally employ their forces in echelons, both in the offense and defense. Each tactical echelon down to battalion determines from the situation the number of echelons required for a particular operation. Each echelon is then given a mission which will assist in accomplishing the overall unit mission.

In the offense two echelons are normal. As a unit attacks in echelon, each with a preplanned scheme of maneuver and objective, the resulting offensive appears to the defender to be a series of attacking waves. One echelon, all subordinate groups in line, is used when the US forces are weak, the area of operations wide, and nuclear allocations plentiful. Three echelons, subordinate groupings in column, are used where US forces are strong, the area of operations is narrow, and few nuclear weapons are available.

In the defense two echelons are normal. The opposing forces commander defends in one echelon only when the front is very wide, insufficient forces are available, US attack is considered weak, or as the terrain so dictates. Similarly, he defends in three echelons when the following conditions exist: very narrow defensive front, exceptionally strong attacking force, and sufficient available forces. These echelons in defense appear to the attacker as a series of defensive positions echeloned in depth.

In addition to echelonment, the maneuver force commander normally retains a reserve, except at company level. The reserve may consist of motorized rifle or tank units and reserves of artillery (antitank and air defense), engineers, chemical troops, and other types of units as required by the tactical situation. The

size of the reserve varies considerably depending upon how the commander evaluates the threat, but the unit reserve is normally relatively small, corresponding to a platoon at battalion level, a company at regiment, a battalion at division, or a regiment at army. At front level a motorized rifle or tank division may be held in reserve. In the offense the commander may withhold a tank unit as a reserve force and not preplan its commitment as part of the second echelon, in which case it can be considered to be his tank reserve or exploitation force. The reserve is considered the commander's contingency force, which he uses to replace destroyed units, to repel counterattacks, or to provide local security against airborne/heliborne and unconventional attack. The tank reserve, as an exploitation force, is used to influence the outcome of the operation.

Tactical Principles

Offense. *Decisive victory is achieved by offensive action only.* Speed and shock are preferred over fire and maneuver as means of developing combat power. All motorized rifle and tank units are considered as part of a maneuver force, with less emphasis on the concept of having to establish a "base of fire."

Tactical operations are planned to exploit firepower to the maximum and adhere to the basic principles of MOBILITY, MASS, SPEED, SURPRISE, and SECURITY. SURPRISE and SECURITY are considered essential and are achieved and maintained by concealing the time, composition of forces, location and direction of attack; by conducting night operations—to initiate the attack or exploit daytime successes; by effective use of camouflage, deception, and strict communications discipline; and, by well-planned, all-around defense against ground, air, chemical and nuclear attack. Assembly areas are well-concealed, and from these areas, units move out to attack at night which complicates US intelligence collection and warning.

Heavy losses and the isolation of units in the assault are expected as the norm.

Flank security is best obtained by aggressive advance and the use of mines.

Smoke, flame, and electronic countermeasures are normally employed to support offensive action. Chemical, biological, and nuclear operations are employed to the maximum after release is obtained. Extensive training is conducted to accustom personnel to chemical/nuclear operations; i.e., soldiers are conditioned by running obstacles while equipped with protective clothing and masks.

The proper use of nuclear weapons is considered decisive.

The opposing forces conduct large-scale offensives by employing fronts to capture objectives that may be 500 kilometers away and, if the situation permits, continue the advance an additional 500 kilometers. The offensive takes the general form of deep tank thrusts, preferably through the weakest part of the US defenses, combined with wide encirclements designed to trap and destroy large US forces and cause the collapse of resistance on a wide front.

When the US forward defenses have been breached by combined arms armies by either penetrations or flank attacks, the offensive is continued by tank armies and combined arms armies. These tank and combined arms armies defeat in detail

those US reserves that can influence the battle or those US forces isolated in the *forward areas*.

The width of the attack zones and depth of the attack formation of an opposing forces unit fighting in nuclear conditions is approximately double that of a unit fighting under nonnuclear conditions.

Tactical movement is characterized by radio silence except for unacknowledged reconnaissance reports or warnings against air, chemical or nuclear attack.

Defense. *The defense is initiated only to gain time or to economize in one area to provide forces for another area. The maneuver force emphasizes the temporary nature of any defense posture and the need to seize the initiative and switch over to the offensive at the earliest opportunity.*

Defensive operations are characterized by a stubborn defense of prepared positions across the US force's axis of advance combined with strong counterattacks. Their purpose is to hold terrain and destroy attacking US forces.

A planned antitank defense is basic to the maneuver force's defensive concept. Antitank fires provide the basis or foundation of defensive fires. Every possible means of antitank protection is used, including obstacles and mobile antitank task groups, in the firm belief that, if the tank element of an attack can be stopped, the attack has been defeated.

Defensive doctrine stresses the need to avoid establishing any set pattern and calls for changing the pattern of defensive employment as often as possible. In general terms, however, the defense is organized into a series of defensive belts, which are combinations of fixed defensive positions in the forward area and mobile counterattack forces in the rear. Great emphasis is placed on elaborate trench systems, heavy fortifications, and extensive use of obstacles. Primary and alternate defensive positions are planned and prepared if the situation and time permits. While engaged units defend their assigned areas, adjacent units may be employed against the flanks of the attacking US forces.

US forces penetrations are first met with local counterattacks. If these prove unsuccessful, the defending units attempt to delay and canalize the attacker into preselected killing zones where he will be subjected to nuclear or all available conventional fires and counterattacks by strong tank elements and mobile anti-tank weapons.

Normally, echelons are used in the defense with two echelons organized for each unit down to battalion level. To the attacker, this appears as a series of defensive positions echeloned in depth.

Mass. The opposing forces achieve mass in decisive areas by rapid concentration of men, materiel, and firepower. They mass conventional and small-yield nuclear weapons fires in the forward battle area supplemented by large-yield nuclear fires for the attack of deep targets. The concentration of assault units and supporting arms usually is made under cover of darkness or reduced visibility by moving rapidly from march columns. This concentration is maintained only for the minimum time necessary, and large-scale concentrations of men and materiel are avoided in nuclear battlefield conditions.

Dispersion. When not concentrated for a specific tactical mission, opposing

forces units are dispersed to the maximum extent possible consistent with the terrain and anticipated employment. Battalion assembly areas are separated by a minimum of 2 kilometers whenever possible.

Surprise. Surprise is sought at all times to paralyze the US forces will to resist and to deprive them of the ability to react effectively. Surprise is achieved by:

- Strict security measures.
- Concealment and rapid concentration of forces and materiel at the decisive points.
- Use of airborne or airlanded forces.
- Sudden employment of mass fires that may or may not be limited to nuclear fires followed by rapid offensive action.
- Exploitation of unfavorable weather and terrain.
- Application of new combat methods.
- Detailed tactical C&D measures.
- Rapid introduction of large tank forces in battle.
- Infiltration tactics.
- Use of radio electronic combat (REC) or electronic warfare (EW).

Command. Unity of command is practiced at all echelons and a combined arms force is commanded by the senior combat arms officer present. All commanders, up to and including those of the motorized rifle division, are required to make detailed personal reconnaissance. All commanders exercise close personal supervision of critical actions, issue very detailed orders, and closely control the actions of subordinate units. The opposing forces have fewer staff officers at each echelon and more troop commanders per individual soldier or crew than does the US Army.

Control. In each opposing forces headquarters, control is exercised by the establishment of a series of command posts. These command posts are designed to insure continuity of control regardless of US action. The distance between command posts is planned to be such that more than one cannot be put out of action by a single nuclear explosion of medium yield.

The formation commander will decide where the command posts are to be set up and the axis on which they will move. The distance of the headquarters from first-echelon units will depend upon the formation and the tactical situation. Commanders believe in detailed and thorough planning and, when time is available, will leave nothing to chance. Coordination is stressed. When little time is available for planning or reconnaissance, the opposing forces deploy quickly in standard formation. Front and army headquarters will generally be sited in depth to maintain control of the entire front/army areas. Divisional and regimental headquarters will, however, be located well forward to maintain control of the battle. The division forward command post, when deployed, will usually move immediately behind first-echelon battalions. Each division-level unit and lower is required to have a main command post and an alternate command post at nuclear safe distances from each other, both fully manned and in continuous operations. In practice, because of the limited number of staff personnel, divisions man their alternate command post with a reduced skeleton force. An alternate command post takes over on order, or automatically, when the main command post becomes inoperative.

On a lengthy move the command posts may leapfrog forward on different routes. They will be preceded by small reconnaissance parties who select the new locations and guide the headquarters vehicles to them. While on the move, command posts maintain continuous radio contact with subordinate units and formation headquarters and flanking troops. Normally, the alternate command post moves behind the main command post, in readiness to take over control if required. Duplicate communications systems are mandatory.

At halts, command posts will be dispersed in protected areas and well-camouflaged. Radio stations and special vehicles will be located some distance from the actual command post. All headquarters have an administrative element which provides a defensive unit and traffic control. Air defense of headquarters receives a high priority.

Formation Commanders. The front commander is concerned with the conduct of the entire operation in which his front is involved and with consideration of the longer term strategic plan. He may be responsible for controlling operations throughout a theater.

Army Commander. The army commander receives his tasks from front. His primary concern is the conduct of operations over a 4- or 5-day period, and he is not usually required to carry out long-term planning.

Division Commander. The division commander is primarily concerned with the day-to-day situation, as it concerns his formation, and less with the future development of the battle. This also applies to regimental commanders.

It is quite possible that the planned speed of operations may result in any commander being required to develop the battle on his own initiative and without recourse to a higher formation. All commanders should therefore be conversant with the general situation and the intentions of the senior commander.

Section 2—The Offense

Types of Offensive Action

Opposing forces perceive three major types of offensive action:

- The Meeting Engagement
- The Breakthrough
- Pursuit

Meeting Engagement

The meeting engagement is perceived as the most common offensive action on the nuclear battlefield. In the nuclear environment combat zones extend over vast areas, and often opposing forces will fight throughout the depth of the zone.

The principal difference between meeting engagements and other types of offensive action is that in the former at least one of the combatants meets the other in an unexpected manner, or both forces come into violent contact with little or no advance warning. Because of the fluid nature of the combat action and the resulting confused situation, opposing forces believe that speed of reaction is

vital, and the commander who can regain the initiative first will have a decisive advantage over the opponent.

When the opposing forces commander believes that the US force is equal to or slightly stronger than his own force, he will attempt to establish a blocking position with part of his force and conduct a flanking maneuver with the main element. His objective is to slow or stop the advancing US force long enough to allow him to execute a flanking maneuver and bypass resistance for the second echelon to eliminate. Adequate firepower in the form of artillery and antitank weapons will be provided to the blocking force.

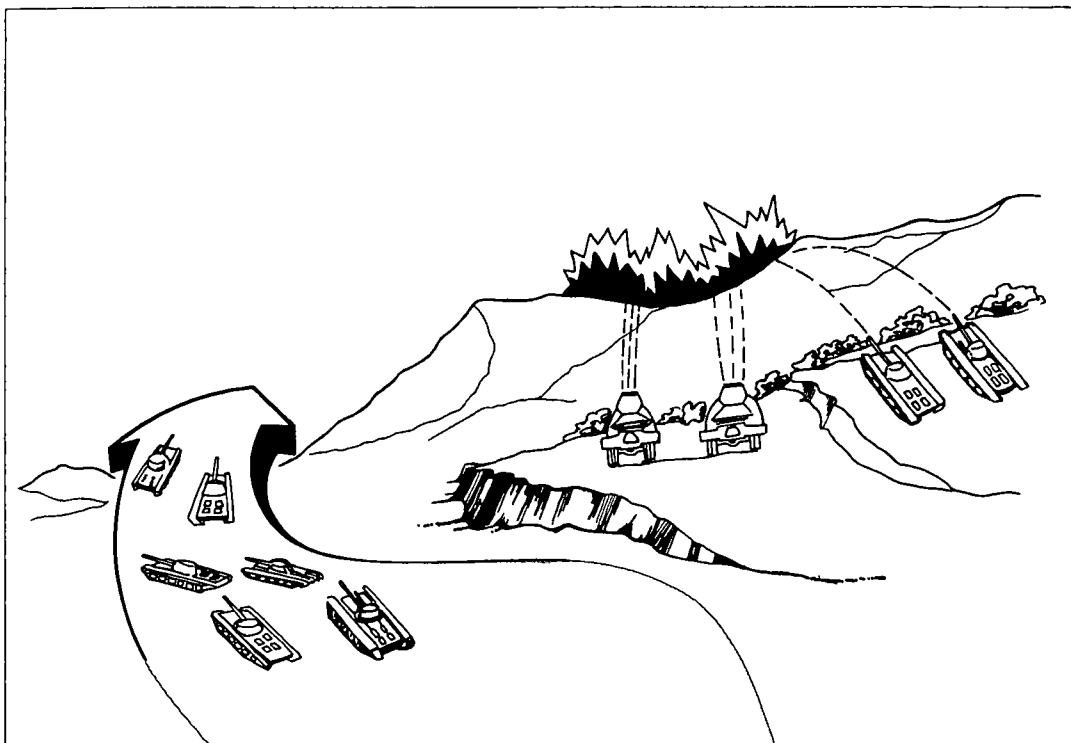
The meeting engagement is characterized by rapid changes in the situation, fluid operations on a wide front, fast changes in combat formations, and open flanks for opposing and US forces. *Opposing forces teach that success in a meeting engagement is achieved by rapid and aggressive action and the coordinated use of all arms despite the lack of detailed knowledge of US dispositions.* The goal is to disorganize and divide the US forces and destroy the divided forces. This may be accomplished by a smaller force if it acts aggressively and launches a coordinated attack faster than the larger force. When employing this method of operation against overextended defenses or unprepared positions, opposing forces will deploy from the march column and attack without halting in the belief that the disadvantage of a hastily planned and uncoordinated attack is more than offset by the advantage of striking an adversary who has had no time to prepare adequately.

Opposing forces doctrine stresses the importance of switching rapidly from the advance to the attack. To meet this requirement they have developed a deployment drill which they call the "attack from the line of march." This drill can be used by a company or by as much as a regiment. Units practice this drill frequently during training.

The Breakthrough

When the US force has established a defensive line, rather than attempting to seize key terrain objectives, the opposing forces generally concentrate on breaking through weakly defended or unoccupied areas to carry the battle to the US rear. The basic organizational concept for breakthrough operations provides for two echelons of attack forces. Surprise, violent action, and speed are emphasized. Once the breakthrough is accomplished, opposing forces consider that the subsequent action, leading to the encirclement and destruction of the penetrated US defenses, will be characterized by a series of meeting engagements.

Breakthrough operations of known US defenses may be conducted with the infantry mounted in BMP's or troops in contact may attack dismounted. In either case, breakthrough operations are characterized by detailed reconnaissance and careful planning. When conducted as a mounted operation, the attack usually commences behind opposing forces lines to achieve the element of surprise. The formation most used is platoon columns on line. Subsequent deployment into battle formation will be dictated by the situation. If the attack is initiated by dismounted troops, they may assault a limited objective and then remount their BMP's to increase momentum of the attack.



Pursuit

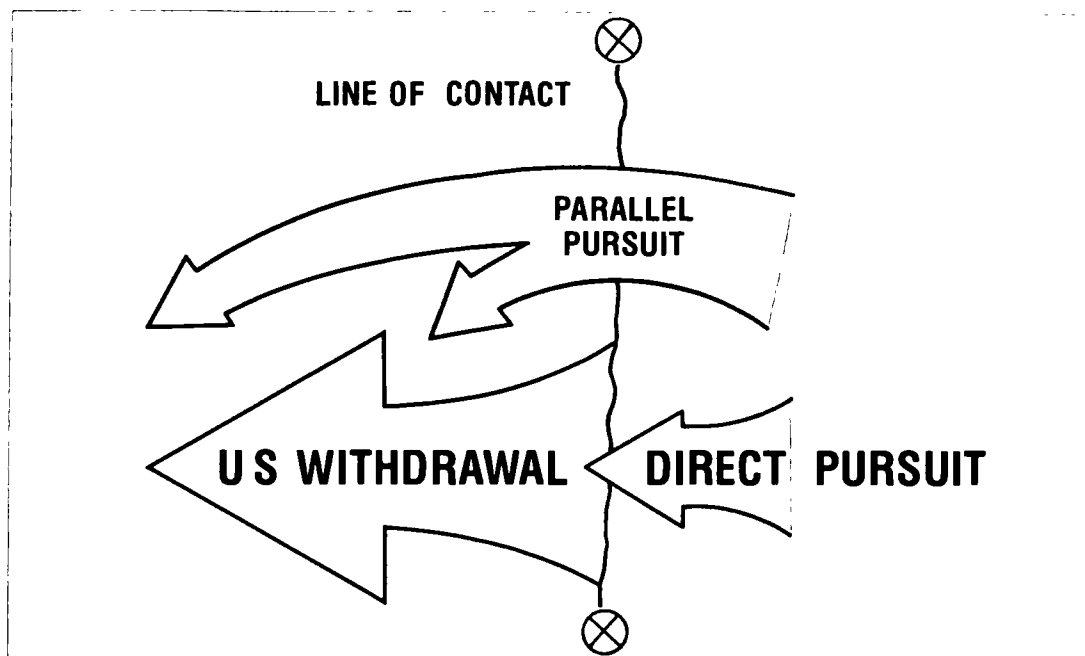
Opposing forces consider pursuit as an offensive operation designed to complete the destruction of the US forces. The opposing forces may use direct pursuit, parallel pursuit, or a combination of both to destroy retreating US forces. Nuclear and chemical fires are employed on US concentrations, defiles, and possible US defense areas. Control of small-yield mobile nuclear delivery systems may be delegated to division commanders. Airborne and airlifted forces may be used to seize critical terrain and block or slow down the US withdrawal.

Planning for the pursuit is started before the attack. Plans include consideration of possible US routes of withdrawal, determination of scheme of maneuver best suited to the particular situation, composition of pursuit forces, and allocation of nuclear weapons and delivery systems.

The pursuit is initiated at the first opportunity by regiments and higher units. The pursuit is terminated only on orders of army or higher commanders. Normally, orders to terminate pursuit are issued when the US force has been completely destroyed, or when pursuing elements have outdistanced their logistical support or are overextended and in danger of being cut off, or when the US force has succeeded in establishing a strong defensive position. When the pursuit ends, units are regrouped and redeployed for the next operation. Artillery, air, tank, and transportation units are brought back under centralized control.

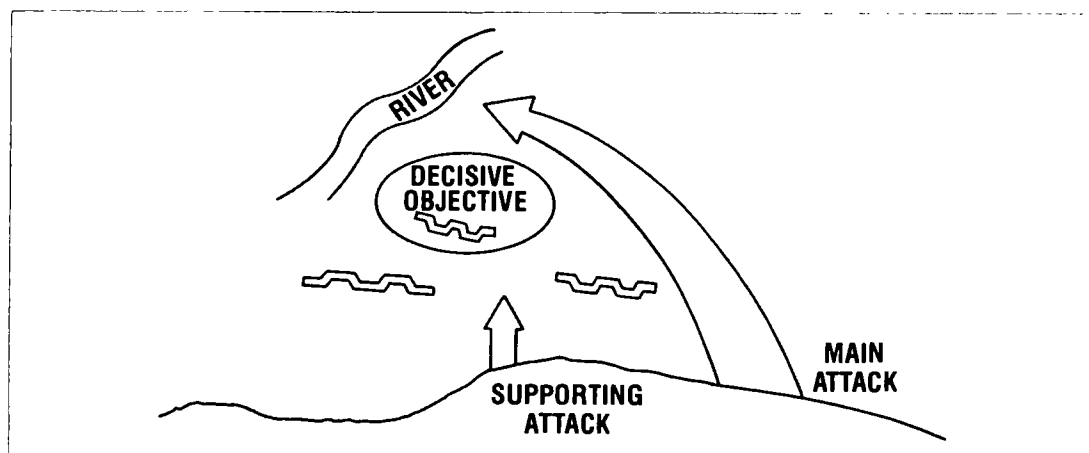
Basic Maneuvers

Opposing forces employ two basic offensive maneuvers with supporting attacks: the envelopment and the penetration. Variations of the envelopment are the single and the double envelopment. The penetration is characterized by a

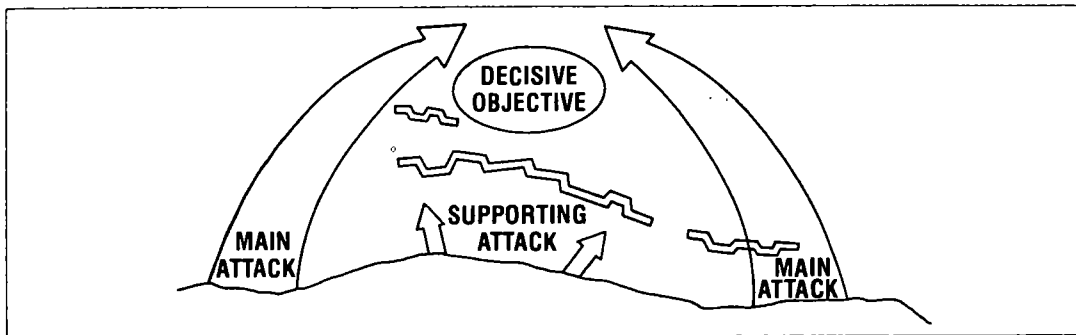


characterized by a strong single thrust by highly mobile forces; variations are the multiple penetration and the pincer. The multiple penetration and the pincer movement are normally used only at army and front level. The other maneuvers may be used by forces of any strength, and opposing forces select the specific type in relation to the US defenses and the capabilities of available US forces. Nuclear fires are planned to facilitate all maneuvers. The various offensive maneuvers are described in detail below.

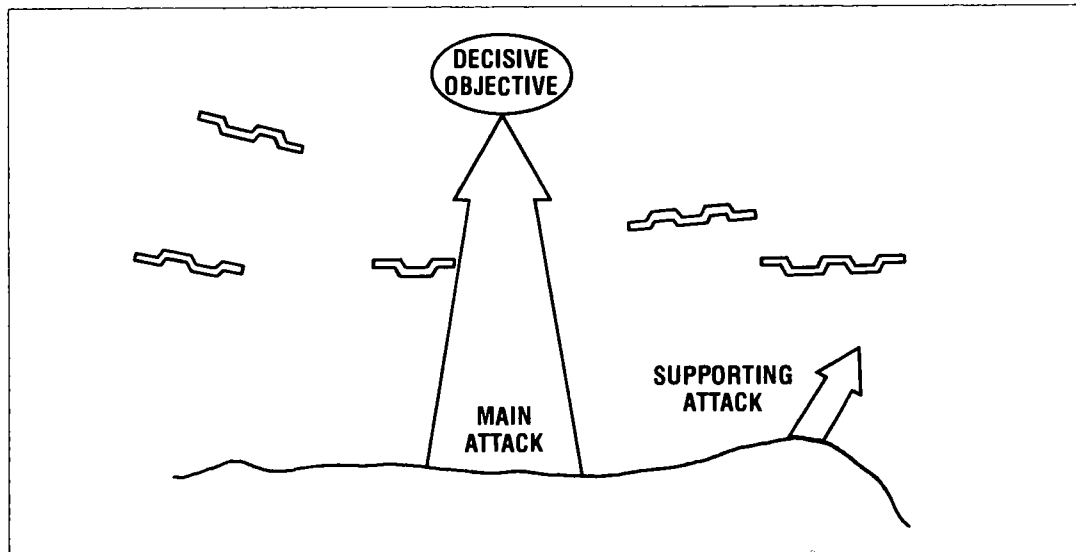
Single Envelopment. The single envelopment is used when there is an opportunity to pin hostile forces against an obstacle. This maneuver permits concentration of effort in one direction, thus helping to insure combat superiority over the US force in the decisive area. Opposing forces doctrine differs from US doctrine (the main attack normally being directed toward a decisive objective) in that the attacking units will attempt to push through weakly defended or unoccupied areas to create gaps that will permit the exploitation forces to strike deep into the US rear. The supporting attack would be developed by succeeding echelons to exploit a break in the defenses and, through subsequent action, encircle and destroy the US force.



Double Envelopment. Opposing forces believe this to be the most decisive maneuver, contributing most effectively to the encirclement and destruction of the US force. It is used only when they have a superior force and there is little risk of defeat in detail.

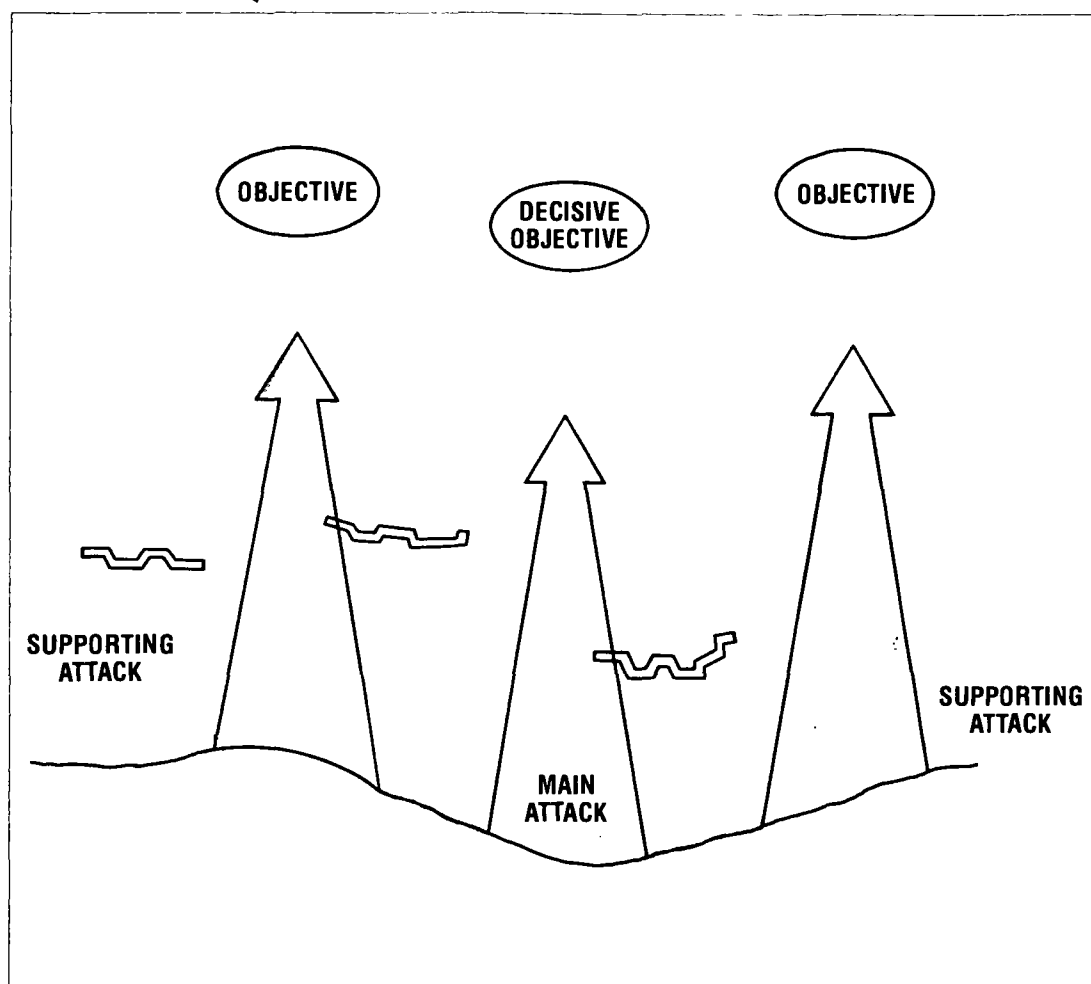


Penetration. Opposing forces conduct penetration through overextended US positions to destroy US reserves. This maneuver will divide continuity of US defenses and enable the defeat of US forces in detail. The penetration is conducted by positioning the bulk of their combat power on a narrow front. Terrain factors and the forces available to execute the commander's attack plan will determine the number of battalions that may be echeloned in depth along each



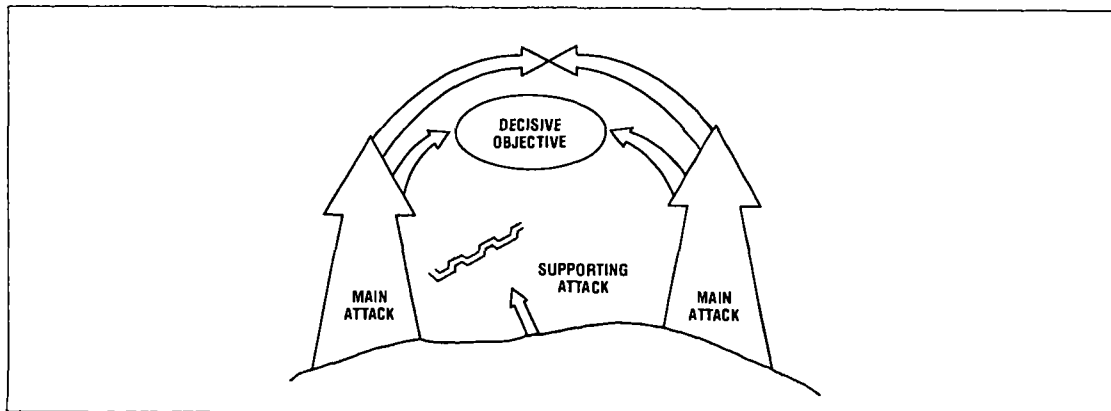
avenue of approach. For example, in a penetration a first-echelon division may use as many as seven battalions attacking on one or more axes of approach. One or more supporting attacks will be conducted to deceive the US force as to the location of the main attack. This forces the US to fight in two or more directions at once, eliminating the US maneuver capabilities. This maneuver is well suited to opposing forces concept of mass because it permits concentration of force in one direction and makes possible defeat of the US force in detail.

When a double envelopment is not possible, opposing forces may resort to multiple penetration if their forces are sufficiently strong. This maneuver consists of a series of penetrations to the depth of the US corps reserves with subsequent encirclement and destruction of the separated US forces. Large forces are re-



quired for this maneuver, as encirclement of the divided US force leads to considerable dispersion. This maneuver destroys the continuity of the hostile defense, leads to the collapse of the defenses in areas large enough to provide ample maneuver room for further operations, and reduces the effectiveness of hostile counterattacks. The availability of large numbers of nuclear weapons facilitates this maneuver.

Pincers. When faced with an adversary whose flanks appear to be unassailable, opposing forces may resort to the pincers maneuver. This consists of two penetrations made to create assailable interior flanks. Mobile forces attack through the gaps created by the initial penetrations, make a deep envelopment to include corps reserves and then, upon meeting at the US rear, face outward to prevent relief of the forces thus encircled. Other forces, forming the inner pincers, operate within the perimeter thus created to divide and destroy the trapped US forces. Inner pincers often try to compress the encircled US forces into good targets for low-yield tactical nuclear weapons.



Changing Doctrine

For some years now opposing forces offensive doctrine has stressed the importance of tank-heavy combat formations which, under nuclear conditions, would be tasked to take objectives throughout theaters of operations at rates of advance up to 100 kilometers per day. This thinking is realistic since opposing forces in Europe enjoy a three to one numerical advantage in tanks.

Moving in the wake of this nuclear-supported armor spearhead, opposing forces motorized rifle units would act as mobile exploitation forces and would be expected to destroy those US strongpoints and pockets of resistance bypassed by tank divisions. Firing from AFV's, rifle troops would keep pace with tank formations until the US units were defeated and the final objectives seized. Recent doctrinal developments have placed greater emphasis on the role of the motorized rifle troops in various battlefield situations. It is speculated that one of the reasons for this change is an increased possibility of a nonnuclear operation. Under nonnuclear conditions, the rates of advance would be decreased, perhaps to less than half of the prescribed nuclear requirement of 60 to 100 kilometers a day. Opposing forces recognize that the lack of nuclear-cleared corridors for their tanks to power through would increase the vulnerability of their armor to antitank weapons and prepared US defenses. Despite every effort they might make to bypass US strongpoints and maintain their offensive momentum, they realize they would have to "gnaw through" US defenses with motorized rifle troops. Such situations greatly increase the importance of motorized infantry units as an initial assault force. This increased mission for motorized rifle troops will be discussed in greater detail in chapter 5, The Motorized Rifle Battalion.

Summary of the Offense

Formations and units are given the following objectives:

- An immediate objective which must be taken by the first echelon.
- A subsequent objective which may require the committing of the second echelon and which normally is the immediate objective of the next higher formation.
- A direction of further advance. It is rare for opposing forces to halt on or consolidate an objective. Commanders at all levels are under an obligation to continue to press forward in the direction laid down by higher headquarters.

Opposing forces doctrine stresses the importance of switching rapidly from an advance or line of march to an attack formation. The planned rate of advance could be 60 to 100 kilometers per day in a nuclear conflict or reduced to 30 to 50 kilometers in conventional operations. To achieve this opposing forces emphasize:

- Hasty attacks, accepting open flanks and the separation of leading formations from the main forces.
- The rapid crossing of water obstacles.
- The use of airborne and airmobile troops ahead of the advance.
- Providing mobility to all combat vehicles, thus providing speed and mobility to the ground gaining arms.
- Maintaining the momentum of the advance by night as by day.
- Strict control of movement and traffic discipline.

Opposing forces aim to maintain their attacks by night with little, if any, slacking of the tempo of the assault. They take full advantage of the cover that night provides to conceal the weight and direction of their attack, and they attempt to time their advance so that the main assault on a strong US position or important river lines will start in the early hours of darkness. All tanks and AFV's have night-driving aids. All tanks (except the PT-76), antitank guns, and some machineguns and rifles have night-firing sights. The range of the tank sight might be up to 1,000 meters. These night-fighting aids are augmented by illuminating fire from artillery and mortars. Airborne operations will often take place at night to help to achieve surprise.

Opposing forces use REC extensively to disrupt the defenders command, control and communications, and to locate and identify elements of the defense.

Section 3—The Defense

General

Opposing forces believe that the "best defense is a good offense." However, there are times when consideration must be given to defensive tactics. *The defense will always be a temporary measure to regain the offense.* The defense is based on a series of strongpoints, with an all-around defense, firmly held by well dug-in troops. This is backed up by a strong and mobile second echelon containing a high proportion of tanks for counterattack and counterpenetration. Opposing forces go on the defensive:

- To economize forces to launch an attack in another area.
- To provide cover for a withdrawal operation.
- To gain time.
- To canalize and destroy US forces thereby creating a situation to regain the offensive.

Defensive doctrine contemplates the selection of a defensive zone in depth. Rather than defend a fixed line, the concept of defense is to hold an area. The defense is designed to repel attacks from all directions and is particularly keyed to antitank warfare.

Defensive Doctrine

During the defense, opposing forces will hold at all costs all previously occupied ground and will inflict the heaviest possible losses on the attacking fire. Relief from this mission can be ordered only by the next higher command.

Opposing forces writers identify stability, activity, antitank organization, all-around security, and the echelonment of forces as being among the basic requirements of the successful defensive. They define each requirement as follows:

Stability. Stability is the capability of the defense to withstand strikes from an opponent's chemical or nuclear weapons, to repel massed assaults by tank and armored personnel carrier forces, and to retain at all costs the defended terrain.

Activity of the Defense. Activity of the defense consists of inflicting the greatest possible number of casualties on the opponent by bringing to bear on him the fires of all weapons, the volume of which increases as the opponent approaches the main defensive lines.

Antitank Defense. Antitank defense is considered to be the foundation of the defense. The opponent's tanks are considered the primary target, and the fires of all weapons that can damage or destroy them are directed at them.

All-around Security. All-around security involves the preparation of supplemental and alternate defensive positions within the defensive area to permit the movement of forces from threatened areas, and to position them for strikes at the attacker's flanks and rear.

Echelonment of Forces. Echelonment of forces is accomplished by deploying in depth the various units in the defensive area. The goal is to weaken the opponent by inflicting increasing losses on him as he penetrates into the defensive area, and to destroy the opponent and reestablish the main defensive line.

Radioelectronic Combat. Opposing forces make extensive use of REC measures to disrupt command, control, and communications of attacking elements.

Planning the Defense

The front headquarters normally prescribes the general location of the forward edge of the main defensive belt and the limits of the army zone of defense. The army designates the more important areas in the main defensive belt that are to be defended, prescribes the antitank defense through the depth of the area, and establishes the counterattack plan. The army also plans for possible withdrawal of forces from forward positions in the main defensive belt when close-in nuclear supporting fires are used. Division commanders select the exact trace of the forward edge of the main defensive belt. Division defensive plans include the organization of the defense, allocation and use of artillery, antitank defense, use of air support, counterattack by division forces, and priorities for the preparation of defensive works.

Organization of the Defense

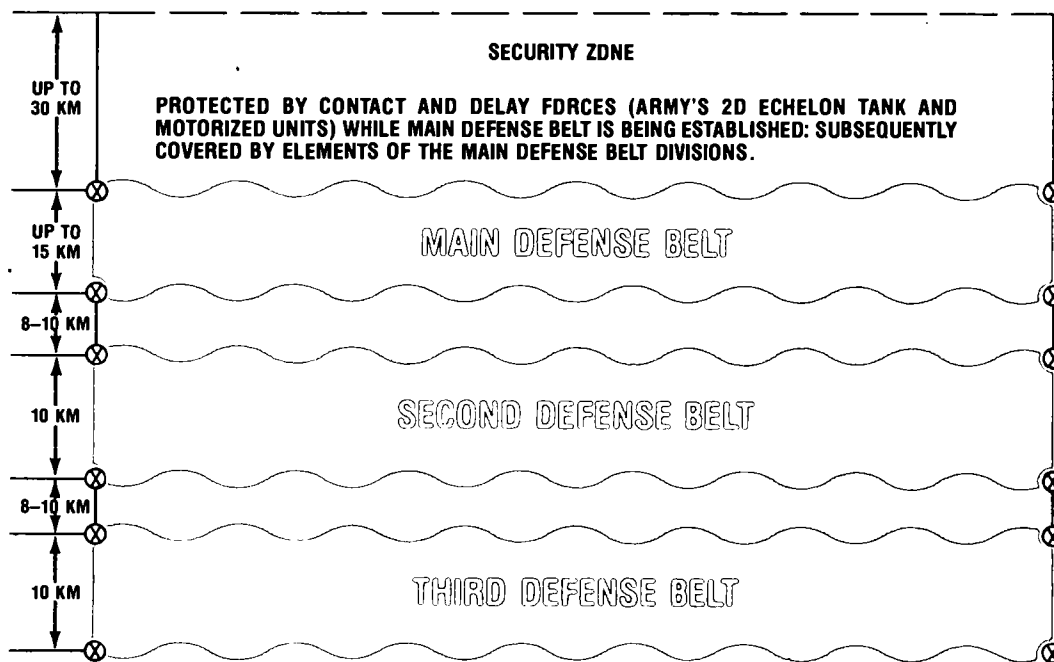
The defense is organized in successive belts designed to provide depth to the defended area. At army level these consist of a security zone, a main defense belt,

a second defense belt, and a third defense belt. *Each defensive belt consists of a series of mutually supported, self-sufficient battalion defense areas designed to be manned by motorized rifle battalions with artillery, mortar, and tank support.* A large mobile reserve is held in assembly areas for each defense belt.

Obstacle belts are constructed forward of and within defense positions of each belt to hinder US forces advance, to canalize them into areas favorable to the defenders, or to cause them to mass into profitable nuclear or chemical targets.

In the organization of the defense, emphasis is placed on protection of troops and materiel from the effects of nuclear fires. In selecting defensive areas, a major consideration is given to terrain features offering best cover and concealment.

THE DEFENSIVE BELT CONCEPT



Security Zone. The purpose of the security zone is to halt the US forces or to delay them by forcing them to deploy before reaching the main defense belt. The security zone extends forward of the main defense belt. It is at least deep enough to prevent US forces from delivering fire on the main and second defense belts with divisional weapons. Usually the security zone is 20 to 30 kilometers deep, but it may be twice that deep if space and troops are available and delaying action can be employed.

The security zone is established and manned by the CAA. The second-echelon motorized rifle units and the tank reserves of the CAA, reinforced with artillery and engineer support, establish and man delaying positions. These are the most forward positions of the security zone.

Delaying forces are disposed on a frontage up to four times as wide as their normal frontage for area defense. This means that there is an average of one opposing forces battalion every 8 to 12 kilometers along the delaying positions.

Naturally, terrain features and the adversary are considerations which will vary this pattern. These forces are known as the contact and delay, or security force of the CAA, and they are normally the only forces available to delay the US forces or to cover the preparation and occupation of the defense belts by the motorized rifle division.

In deploying their forces in delaying positions, opposing forces concentrate most of the combat power in the first echelon with tank reserves being retained primarily to assist in the disengagement of the first-echelon force.

When not in contact with US forces, the motorized rifle divisions manning the main defense belt establish general outposts in the security zone as much as 25 kilometers in front of the main defense belt. This is in addition to the CAA security force. Normally, the division's second echelon (a motorized rifle regiment) is employed in this task. As in the case of the contact and delay force, probable deployment of the general outpost force would be in order of one opposing forces battalion for each 8 to 12 kilometers of frontage.

First-echelon regiments of the main defense belt establish a system of combat outposts in the security zone 3 to 5 kilometers in front of the forward battalions. Their mission is to protect the main defense belt against surprise attack, prevent US reconnaissance, locate hostile artillery fire on the main defense belt, deceive the US force as to the true location of the forward elements in the battle area, and prevent the US force from clearing obstacles.

Combat outposts are manned by regimental second-echelon units. Generally, a motorized rifle battalion is disposed along each 15 kilometers of the combat outpost line. It employs its forces to establish security outposts along the outpost line. An outpost may consist of a motorized rifle company reinforced by machine-guns, mortars, antitank guns, recoilless guns, and engineers.

The main body of an outpost is deployed across the primary approaches to the battalion defense area and occupies an area up to 1,200 meters wide. Areas not physically occupied are covered by patrols, observation, artillery, and obstacles to include minefields.

Local security is established by the first-echelon battalions of the main belt division's first-echelon regiments. Observation posts, security posts, and patrols are used in front of the main defense belt and in gaps between units. Normally, local security is provided up to 600 to 900 meters beyond the unit being secured.

Mission of the Main Defense Belt. This belt is the bulwark of the defense. It is selected to take advantage of natural defensive terrain that affords the maximum passive defense against nuclear attack and the target acquisition capability of the US force. If possible this belt is located behind a natural obstacle. It is designed to stop a hostile attack and destroy the attacking forces. This belt is up to 15 kilometers deep. It is manned by the motorized rifle divisions comprising the first echelon of the CAA. Within the main defense belt are those forces necessary to conduct the defense, including tank, artillery, antitank and air defense units; division reserves; and the division main and alternate command posts.

Mission of the Second Defense Belt. The second defense belt, up to 10 kilometers deep, is located 8 to 10 kilometers to the rear of the main defense belt, and it usually has prepared, but unoccupied, defense positions in its forward area.

This defense belt is intended to contain the US force, if it breaks through the main defense belt, until counterattacks from the area of the third defense belt can be launched. The second defense belt is established and defended by the CAA's second-echelon motorized rifle divisions and reserves to include the tank division which deploys to assembly areas in the second defense belt after completing its mission in the security zone. The tank division may also be given a secondary mission of being prepared to establish defense positions in the second defense belt. The CAA's main and alternate command posts, some artillery, and portions of the CAA's reserve are located in the second defense belt.

Mission of the Third Defense Belt. The third defense belt, 8 to 10 kilometers to the rear of the second defense belt, is approximately 10 kilometers deep.

The mission of the third defense belt forces is to prepare to mount a counterattack. In the event a counterattack cannot be mounted, they will man prepared defense positions and attempt to stop the US advance. Front counteroffensives are launched from the area of the third defense belt. Located in or near this belt are the CAA's reserve, usually a reinforced regiment from a first-echelon division, and the front's second-echelon forces, usually consisting of elements of the tank army, reserves available to front, and possibly a CAA dispersed over a very wide zone.

Antitank Defense

Antitank defense is basic to the opposing forces defense concept. Overall antitank defense usually is planned and coordinated at army level, but its specific planning is considered one of the most important duties of commanders at all levels. Divisional and regimental antitank defenses are organized throughout the depth of the defense zones, mainly along avenues of approach vulnerable to tanks.

The opposing force system of antitank defenses includes unit strongpoints with antitank weapons, firing positions prepared for occupation by tanks and antitank reserves, preplanned artillery concentrations on vulnerable avenues of approach, and extensive use of antitank mines and other obstacles.

Organization and Conduct of Antitank Defense

Opposing forces deploy antitank weapons so as to insure interlocking fire along the frontline and in depth; to insure the possibility of switching fire rapidly; also to insure thorough coverage of flanks and of most likely and/or actual axes of advances of US tanks. Opposing forces never deploy antitank weapons frontally on line.

Antitank defense plans include:

- Locating defensive positions on terrain unfavorable to the operation of armor.
- Attaching additional antitank units to frontline defensive positions to cover the most dangerous avenues of approach. (In areas where there is a serious armored threat, 25 to 35 antitank guns for every 1,000 meters of front may be used.)
- Placing extensive minefields on avenues of approach.
- Destroying with nuclear fires US armor in rear areas and in attack positions.
- Concentrating artillery fire on US tanks as they approach the defensive position and separating accompanying infantry.

- Opening fire with antitank guns and ATGM on US tanks as they approach within effective range.
- Using artillery, antitank guided missiles, air defense artillery, tanks, and SP guns in direct fire on tanks that have penetrated the defense position.
- Counterattacking armored penetrations with tanks and SP artillery.

Employment of Mines and Obstacles

Mines. Opposing forces make extensive use of HE and chemical mines in the offense and in the defense. In the offense mines are used to cover positions held by recognized troops or to protect flanks. Their greatest employment is in the defense against tanks, vehicles, and personnel. Antitank minefields are laid with a minimum average density of one mine per meter of forward area. Because the average distance between mines is 3 meters, three rows of mines are required for minimum density. Minefields are laid in great depth.

In the defense antitank minefields normally are placed in belts across likely tank approaches about 400 meters in front of the forward defenses, across approaches to strongpoints, and across approaches to the division artillery areas. Controlled HE and chemical mines, detonated by concealed observers, are placed in gaps in standard minefields similar to the ones used by US units. Delayed action mines are used along railroads, at road intersections, at destroyed bridges, in probable assembly areas, and in other localities where US concentrations might take place. Antipersonnel, HE, and chemical mines are laid on the approaches to and within antitank minefields.

Obstacles. Obstacles other than mines are placed to cover all probable US avenues of approach. Extensive improvisation is used. Local civilian resources are used extensively in construction of obstacles. Principal obstacles are antitank ditches, tank traps, abatis, and chemical contamination. Obstacles and minefields are covered by fire whenever possible.

Section 4—Retrograde Operations

General

Local withdrawals, as directed by higher headquarters, are normal to opposing forces area defense and are employed to reduce vulnerability to nuclear fires, to canalize or ensnare the US force into suitable target areas, or to regroup forces for more effective containment of a US penetration. *Opposing forces rarely execute a general withdrawal, preferring to conduct delaying action.*

Opposing forces employ three types of defense operations in retrograde movements.

- The Delaying Action • Withdrawal • Retirement

Opposing forces assign reinforced motorized rifle and tank units to cover the disengagement of the main force. These units remain in the defensive positions of the main force and continue to conduct defensive operations with the intent to confuse and deceive the US forces so as to conceal from them the fact and extent

of the main force's disengagement for as long as possible. These same units may subsequently be used to relieve or reinforce rear guard units covering withdrawal.

Opposing forces place great emphasis on reconnaissance activities as well as REC in retrograde operations. A major preoccupation is the fear of US outflanking and developing movements. Consequently, the primary efforts of reconnaissance activities during retrograde operations are directed at ascertaining the US force's intent and capability to threaten the flanks of the withdrawing forces. A constant watch is also kept on adjacent friendly units for the continued presence of a mutual support capability. Reconnaissance is also conducted toward the rear to retain continuous awareness of the conditions of withdrawal routes.

The Delaying Action

Opposing forces employ delaying action to trade space for time to inflict maximum punishment on the US force without becoming decisively engaged in combat. Opportunities are constantly sought to set up ambushes and traps for the advancing US force. Delaying forces offer sufficient continuous resistance to prevent infiltration and to force the US Army to concentrate for deliberate attacks.

To facilitate the delay, long-range fires, prepositioned nuclear weapons, flame and chemical mines, and obstacles and ambushes in depth may be used. At times long-range fires may be deliberately withheld for deception purposes.

First-echelon forces, which constitute the bulk of available combat power, engage the US force at long ranges to cause casualties and to force it to execute time-consuming deployments. As the US force advances, it is subjected to repeated flank attacks by small mobile units. As it comes within range of additional weapons, the total volume of fire is increased. Every effort is made to inflict maximum casualties on the US force, disorganize it, and force it to reorganize or mass for an assault. The concentrating US force is attacked and destroyed by fire and, where appropriate, exploited by maneuver. The effective use of obstacles, particularly when covered by fire, reinforces the delaying capability of a unit. The availability of low-yield nuclear weapons and precision delivery systems will assist disengagement, and may permit the delaying force to accept closer engagement than would otherwise be practicable.

Second echelons and tank reserves are employed in counterattacks or covering forces to assist in the disengagement of the first-echelon forces. Low-yield nuclear weapons may also assist in this action.

When threatened with decisive combat, the delaying force disengages and executes a withdrawal.

Withdrawal

Opposing forces execute a withdrawal when it is necessary to disengage their forces from the US force. The disengagement normally takes place from rear to front in a manner similar to that used by US forces. The first units to withdraw are rear service units and front artillery. These units usually move back under concealment of darkness one or two nights before the withdrawal of the forward armies.

A general withdrawal is planned in as much detail as time permits. Demolition and scorched earth plans are prepared prior to initiating a withdrawal. Withdrawals normally take place on a broad front in darkness or under cover of smoke and artillery fires, including nuclear fires. Limited tank counterattacks may also precede withdrawals.

Rear guards are always used by opposing forces to cover withdrawals. Rear guards normally consist of motorized rifle units reinforced by tank and engineer units forming strong, aggressive, and highly mobile groups capable of independent operations.

Rear guard elements hold, in succession, a series of defensive lines and fall back from line to line as the US pressure increases, in each instance managing to compel the US force to deploy, thus gaining time for the withdrawing main force. As the rear guard falls back, they execute previously prepared plans to slow the US advance by carrying out demolition missions, destroying bridges, and blocking side routes and parallel routes as well as the main route of US advance. They may also, if the nature of the terrain is appropriate, detonate prepositioned nuclear devices and flame or chemical mines to create major obstructions to the US force's progress.

Opposing forces make extensive use of flank security forces to block outflanking and enveloping attempts by the US. These forces, normally tank and motorized elements reinforced by antitank artillery and engineer elements, move out along the flanks of the withdrawing force to intercept and delay long enough to allow friendly forces to withdraw safely.

Missile and conventional artillery support rear guard operations and, in addition, deliver interdicting fires to assist in blocking US flank and enveloping threats. US armor is their primary objective.

All key terrain features along the route of withdrawal, to include defiles, bridges, crossings, and road junctions, are occupied and held by elements of the withdrawing forces until the main body has passed through them and the rear guards have reached them. The rear guards take over and carry out their mission of delay and destruction and, in turn, withdraw. Engineers assist in setting up obstacles, supporting the rear guards, and maintaining crossings and roads along the routes of withdrawal long enough to allow friendly forces to use them for retrograde movements.

Retirement

Opposing forces consider retirement as a defensive operation allowing opposing forces, after a successful disengagement, to move away from the US force without direct pressure.

Retirement consists of withdrawal followed by a tactical road march. The tactical road march begins after the main force has disengaged from the US force and march columns have been formed.

The tactical road march, which constitutes the actual movement away from the US force without pressure, is conducted in a manner similar to the advance to contact.

- A strong rear guard is employed, and it generally maintains contact with the US force.

- The direction of movement is away from rather than toward the US force.
- The ultimate destination of the force is an assembly area or location to prepare for a subsequent mission rather than contact with the US force.

Section 5—Intelligence Indicators

Use of Intelligence Indicators

In spite of all precautions taken to deceive the US force about their probable courses of action, opposing forces must inevitably carry out specific activities in preparation for or in conjunction with specific actions. Some of these activities may be essential to the intended mission, others may be dictated by the concept of tactics peculiar to their military thinking, and still others may come about as the result of an implemented tactical cover and deception operation. In many cases, these activities can be detected and when properly evaluated and interpreted will allow the development of a reasonable estimate of the commander's probable course of action. Opposing forces commanders, however, are well aware of this and will often attempt to turn this vulnerability into a deception measure by allowing hostile intelligence to detect activities intended to indicate a course of action which, in effect, may be opposite of what in reality they are preparing to do.

The following paragraphs contain some intelligence indicators with an explanation for each in terms of present doctrine. An indicator is an activity of a pattern of activities that may be reported. *An individual indicator or activity cannot stand alone and must be evaluated and confirmed with other information.* This list of indicators and activities is by no means complete nor is it intended for dogmatic application in all situations. It is primarily a sampling of typical indications and activities, suitable for portrayal in exercises to enhance intelligence training.

Attack or a Tactical Cover and Deception Operation that may accompany an attack may be indicated by:

INDICATOR: Concentration of mass in forward assembly area which may be up to 20 kilometers from the forward edge of a first-echelon division.

EXPLANATION: Single or double envelopment is normally attempted in the offense by division-size or larger units. Regimental-sized units and their subordinates which are part of the first-echelon division base may mass in assembly areas for the execution of a divisional primary or secondary attack as part of this operation. Normal patterns of activities will be detectable when these masses are formed. Some of these may be: movement of vehicles, personnel, weapons, and associated communications equipment to new locations; increased logistical activities; formation of one or more regimental artillery groups (RAG's) consisting of one or more artillery battalions, increased counterreconnaissance measures; and attachment of tank, motorized rifle, engineer, and antitank units up to battalion size to first and second-echelon regiments and possible lateral shift of unit frontages.

INDICATOR: Increased counterreconnaissance efforts.

EXPLANATION: To deny US Army collection agencies information about a future operation, it is necessary normally to strengthen the counterreconnaissance

effort in the geographical area of the operation. This may be noted by increased level(s) of: radio communication discipline, patrolling, jamming of ground surveillance, side-looking airborne and counterbattery radars, and exchange of radio components within a unit as well as change of the communications-electronics standing operating instructions (CESOI).

INDICATOR: Air defense weapons systems deployed well forward in the army area.

EXPLANATION: Air defense weapons systems that form an all-around air defense envelope will deploy from this configuration to provide protection for moving columnar formations of mixed motorized rifle, tank, engineer, and artillery units. Some of the possible activities that may be associated with this deployment are: absence of target acquisition, missile control and fire control radars from known locations; radio silence; recent additions to air defense and ground controlled intercept nets; prolonged or broken standdown patterns on early-warning, target acquisition, and ground control intercept radars; displacement of associated equipment of these systems forward, e.g., transporter erector launchers (TEL's), communications equipment and missile cannisters and standdown of missile and fire-control radars until the moving columns are engaged by hostile air.

INDICATOR: Artillery positions well forward and massed, so positioned as to provide support main and secondary attacks.

EXPLANATION: Opposing forces guidelines indicate that front and army artillery units will, and second-echelon division artillery units may, be provided to first-echelon divisions to support attacks. Composition and exact disposition of both the RAG and division artillery group (DAG) will vary with the terrain and mission, but normally both will be found within 6 kilometers of the forward edge of a first-echelon division in the offense. Some activities that may be associated with this are: movement of personnel, vehicles, weapons, and equipment to the support areas; occupation and possible construction of firing positions for each tube; survey activities; additional fire control nets or subscribers to existing nets; associated logistic activities; possible increased meteorological radar activity; spotting counterbattery radars; and increased laser-ranging activity and night-driving devices.

INDICATOR: Clearing and marking of lanes in, or removal of, obstacles.

EXPLANATION: Engineer elements may clear and mark lanes in obstacles and prepare obstacles for command demolition in the forward edge of the first-echelon division area so as to afford easy and rapid passage during the attack.

INDICATOR: Increased logistical and service activities.

EXPLANATION: An increased amount of available supplies is necessary to conduct an attack operation; as the size of the unit increases, the volume of supplies also increases. The movement of these supplies forward may be traced from dumps in the rear of the front area in various ways. Medical service units as well as stockpiles of supply items for all units will displace forward. Some examples of this might be: centralization of tank transport vehicles within the front; increased convoy and boxcar movement; movement of special engineer service organizations so as to support the attack; expansion of, or the establishment of, additional supply dumps in the first-echelon division area; and increased moving target indicators on waterways, trails, road nets, and cross-country.

INDICATOR: Increased reconnaissance efforts.

EXPLANATION: To provide information for planning purposes, increased reconnaissance efforts in the geographical area of the attack are normally necessary. These efforts may form a pattern of increased levels of frontline patrolling, signal and electronic intelligence collection activities, air reconnaissance sorties, and reporting from long-range reconnaissance units located behind friendly lines. Reconnaissance may be feinted in some areas for deception purposes.

INDICATOR: Concentration of division-sized units in mass toward either or both flanks located deep within a first-echelon division's defensive area.

EXPLANATION: Concealed motorized rifle, tank, engineer, artillery, and other units may be tactically deployed in assembly areas behind a covering first-echelon defensive division when an army is preparing for a major attack. Some of the activities that may be reported in this situation are: extensive counterreconnaissance measures in a geographical area; concentration of air defense and artillery units to support and protect these units; radio silence by these units; standdown of radars until hostile air must be engaged; extensive air and/or ground controlled intercept efforts; attachment of CAA or front engineer units if a major water barrier is to be crossed; and extensive logistical activities.

INDICATOR: Movement of echeloned columns of extensive length forward from the rear area of a first-echelon division.

EXPLANATION: A major attack may be launched by a large unit on a narrow frontage when it is in a column. Portions of the total column will contain artillery, tank, motorized rifle, air defense, and engineer units. Some of the activities that may be associated with this operation are movement of the units in tactical columns, an associated air and artillery preparation, jamming of friendly side-looking airborne radar (SLAR) collection aircraft, displacement of protecting air defense systems, and possible use of night-driving devices.

INDICATOR: An extensive artillery and aviation preparation and support.

EXPLANATION: In conventional warfare offensives by tank and motorized rifle divisions are built around the striking power of aviation and massed artillery. This support may precede the attack by a considerable time length, but normally it will commence up to an hour prior to the arrival of the major attacking force. Some of the reported activities may take the form of the following pattern: from one-half to one and one-half hours prior to the start of preparation, movement of columns from the rear forward; probable movement of first-echelon division forces in the area during the preparation; radio silence observed throughout the division area with the possible exception of fire-control nets; use of night-driving and laser-ranging devices; concentrations of fire on various targets, shifted to narrow frontages, then to the depth of the friendly position; and the use of EW.

INDICATOR: Discovery of intensive and semiintensive deceptive measures contained or occurring within a major or significant geographical area.

EXPLANATION: To achieve tactical surprise, US intelligence agencies must be deceived as to where and when the major offensive effort is to be made. This tactical cover and deception operation is planned and implemented. Activities that may be reported are some of those associated with major or primary attack with possibly some of the following exceptions: passage of dummy traffic; mixtures of dummy and real equipment; use of roving guns; temporary occupation and construction of extensive artillery positions; extensive artillery registration;

occupation of major assembly areas with only small forces and displacement of communications and noncommunications equipment forward and laterally. Unusual expansion or decrease in communications traffic and changes in communications patterns are also means by which opposing forces would try to deceive us.

Defense May Be Indicated By:

INDICATOR: Formation of an echeloned all-around air defense envelope.

EXPLANATION: An air defense envelope is formed in the defense, echeloned from the first defensive line to the rear with low, low-medium and high-level air defense systems. Components of this system may include a command/control network, EW/target acquisition/missile control/fire control radars, antiaircraft guns, missile TEL's and their associated equipment.

INDICATOR: Construction and occupation of successive defensive lines.

EXPLANATION: In the defense separate and distinct defensive lines are prepared and occupied. Included in these are: construction of alternate firing positions; digging of trenches; erection of wire obstacles; extensive preparation of field fortifications with overhead cover; the digging of antitank ditches; and construction of switch positions.

INDICATOR: Establishment of a covering force.

EXPLANATION: One of the main elements of the defense is the establishment of a covering force. This force may consist of reconnaissance elements, a security zone, and forward positions or battle outposts. The mission of these forces is to delay and force deployment of the attacker and provide early warning of, and deceive the attacking force as to the location of the first defensive line.

INDICATOR: Preparation of battalion strongpoints on key terrain.

EXPLANATION: Defensive battalion strongpoints are prepared on key terrain to cover approaches into the position of the first-echelon regiments and division by improvement of the terrain in the area with mines, wire, and other obstacles. Initial positions are dug in with overhead cover and then expanded into trench systems. Antitank strongpoints are constructed, then occupied. Possible attachments are made from tank, antitank, and engineer units organic to the regiment and division.

INDICATOR: Displacement of command headquarters, units, and logistical activities into a defensive posture.

EXPLANATION: Command headquarters of first- and second-echelon and reserve regiments and first-echelon division, as well as the associated logistical and service units, will displace to the rear. An additional command post will be constructed for the commander forward of the headquarters for control purposes. RAG's and DAG's will be formed and deployed up to about 6 and 11 kilometers from the forward edge of the first-echelon division.

INDICATOR: Large formations of motorized rifle, tank, and other units located some distance behind the forward edge of the first-echelon division.

EXPLANATION: Opposing forces regard defense as a tactical expedient until the offense may be resumed. One of the methods used to do this is to inflict heavy losses on a hostile attacking force in a planned major counterattack. Activities that may be reported when this is implemented are similar to those found when this force is planning a major attack with some of the following exceptions or

additions: distance from the line of contact artillery and surface-to-surface missile units will be greater; the attacker will be channelized by stubborn resistance in certain avenues of approach; large formations of antitank weapons will be deployed along selected avenues of approach deep within the defensive position; discovery of unoccupied or dummy positions behind the forward edge of the first-echelon division; and use of roving guns.

Reinforcement May Be Indicated By:

INDICATOR: Movement of additional tactical units toward the main battle area and identification of new units in the area of a first-echelon division.

EXPLANATION: This action will increase the units available to the army commander in his geographical area. Some of the activities that probably would be reported are: movement of units into the area of a first- or second-echelon division; total numbers of equipment and personnel in an area that are far in excess of those found normally in the division area; receipt of fire from artillery weapons found normally at army or front level; and shift of or in unit frontages.

INDICATOR: Additional command headquarters, supply, and evacuations installations.

EXPLANATION: The presence of additional units would cause an increase in activities of these type organizations.

INDICATOR: Loss of location of a known major unit.

EXPLANATION: When loss of location of a major unit is noted, the major courses of action available to any unit must be considered and evaluated. These courses of action are reinforce, attack, defend, or withdraw.

Delaying Action May Be Indicated By:

INDICATOR: Withdrawal from defensive positions before becoming heavily engaged.

EXPLANATION: Delaying actions will normally take place when units of the covering force are forced from their positions by actions of the attacker. These units will fall back under pressure into prepared positions in the defensive belts or lines. Some of the activities that may be reported are: discovery of dummy minefields and positions; withdrawal from partial defensive positions before becoming heavily engaged; and engagement of the attacking force at maximum range with all available weapons.

INDICATOR: Successive local-level counterattacks with limited objectives.

EXPLANATION: Counterattacks at the local level may be employed in the delay to assist in the disengagement of forces, deceive the attacking force as to the location of the forward boundary of the first-echelon division, or cover the withdrawal of a major unit. Some of the activities that may be reported are: attacks delivered to the flanks and front of the attacking force by motorized rifle and tank units, supported by artillery or antitank fires forcing the attacker to deploy; frontages up to four times those found under normal defensive doctrine for the type unit; counterattacks broken off before the defensive position has been restored; and minimum logistical and medical activities supporting the defensive force found well to the rear and centralized.

Withdrawal May Be Indicated By:

(Indications for a withdrawal are generally the same as those for a delaying action with the addition of the following):

INDICATOR: Rearward movement of long-range artillery and supply echelons.

EXPLANATION: Normally, the first units to be withdrawn are supply and service followed by long-range artillery. These units will withdraw under the cover of darkness before the main body. Some of the activities that might be reported are preparation of supplies that are not to be moved for destruction, firing or preparing for destruction of artillery ammunition for which transport is not available, use of night-driving lights along avenues of withdrawal, and increased counterreconnaissance measures.

INDICATOR: Systematic or hasty destruction of bridges, communications facilities, lines of communication, tunnels, and other military and key civilian assets.

EXPLANATION: Hasty destruction will normally precede a withdrawal, while deliberate systematic destruction and scorched-earth tactics may or may not. Some of the activities that may be observed and reported are: stockpiling of explosives at central locations; installation of boobytraps in selected areas; preparation of bridges, tunnels, dams, and dikes for command detonation/destruction; preparation of craters, abatises, and other engineer targets/obstacles for use; and uncontrolled fires in agricultural and built-up areas.

INDICATOR: Breaking of contact.

EXPLANATION: Contact will be broken in a major withdrawal action if at all possible and conducted under the cover of darkness. This action is covered by intense artillery fires, air strikes, and nuclear fires and may be preceded by local-level counterattacks. Activities reported will probably be in a pattern outlined as above, with the following additions: movement of columns to the rear to new defensive positions and use of smoke if the operation is to take place during daylight hours.

INDICATOR: Establishment of a covering force and a rear guard.

EXPLANATION: A covering force and a rear guard are established to cover the movement of the main body. Motorized rifle and tank units left in forward areas act as the covering force to maintain the defensive posture. These units may be used as a counterattacking force if pressure is applied by an attacking force. The rear guard, which is a larger tank-heavy force, will act as the major covering element for the operation. A delay along conventional lines will be undertaken until the future defensive positions are occupied and a defensive posture is obtained by the main body.

Presence and Use of Nuclear Weapons May Be Indicated By:

INDICATOR: Heavily guarded installations.

EXPLANATION: Sites for nuclear storage are normally characterized by being centralized, accessible to lines of communication, and heavily guarded, and by the presence of an active local security/counterreconnaissance screen.

INDICATOR: Preparation of artillery firing positions.

EXPLANATION: At least primary and alternate firing positions will be constructed for heavy artillery with possible nuclear capabilities prior to their occupation.

INDICATOR: Presence of meteorological radars.

EXPLANATION: An END TRAY radar is part of the organic equipment of both the FROG and SCUD systems as well as other organizations.

INDICATOR: Construction of FROG, SCUD, or SCALEBOARD launch positions.

EXPLANATION: All of the above systems have confirmed nuclear capabilities and a survey controlled launch position is constructed for each TEL prior to their occupation.

INDICATOR: Movement of TEL's to launch site.

EXPLANATION: TEL's remain in camouflaged positions until movement into the launch site.

INDICATOR: Presence of missile cannisters and other missile unit-associated equipment.

EXPLANATION: Presence of unit-associated equipment will possibly indicate that the unit that it is organic to is nearby.

INDICATOR: Actions by personnel prior to the use of a nuclear weapon.

EXPLANATION: Certain actions are taken by units and personnel when known or suspected use of nuclear weapons is to take place. Examples of the activities are removal of camouflage nets, movement of vehicles to reserve slope positions, lowering of windshields on vehicles, construction of special positions, and removal of antennas and other exterior equipment from vehicles.

INDICATOR: Missile associated activities occurring in areas where the nuclear capable weapons systems will be deployed by doctrine.

EXPLANATION: Atomic demolition munitions (ADM) that may or may not be command detonated are used to destroy attacking US forces, contaminate the area, disorganize and channelize the attackers, and create obstacles to their movement. In addition to the actions outlined in the preceding paragraph, the following activities may be reported: A small party may position a device above or below ground level; near a transportation hub, choke point, or forest; or on or in a major avenue of approach. Local security is maintained at the atomic demolition munitions (ADM) site if the weapon is to be command detonated and then rapidly withdrawn upon approach of the attacking forces.

Chapter 3

THE MOTORIZED RIFLE COMPANY

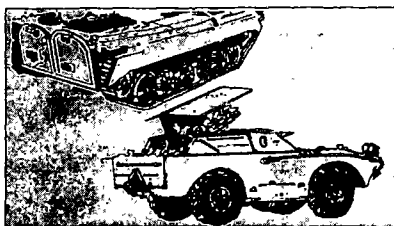


TABLE OF CONTENTS

Section 1

Organization	3-1
General	3-1
Personnel, Weapons, and Equipment	3-1
Mission	3-2
The Squad	3-3
The Platoon	3-3
The Company	3-3

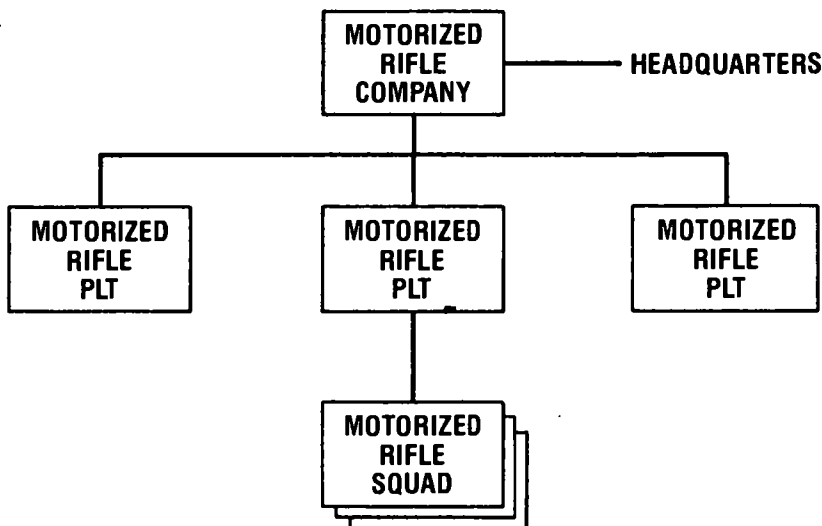
Section 2

The Offense	3-4
General	3-4
Important Points About the Motorized Rifle Company	3-4
Conduct of the Attack	3-5
Dismounted Assault	3-6
Dismounted Formations	3-6
Meeting Engagement	3-6
The Breakthrough ..	3-8
Pursuit	3-8

Section 3

The Defense	3-9
Mission	3-9
Defensive Organization	3-9
Commander's Responsibility	3-9
Fighting Positions ...	3-9
Antitank Weapons ..	3-10
Withdrawal	3-10

Section 1—Organization



General

The motorized rifle company is a highly compact mobile unit with little organic support. The mission assigned to the opposing forces company will determine the type of additional assets made available from battalion or regimental level. Unlike its US counterpart, the motorized rifle company does not have organic support such as a mortar platoon or maintenance section.

Personnel, Weapons, and Equipment

UNITS	PERSONNEL			WEAPONS & EQUIPMENT									
	OFFICER	ENLISTED	TOTAL	APC BMP	7.62MM LMG PKT (BMP COAX)	SAGGER (AT-3) BMP LCH	73MM GUN (BMP)	7.62MM PKM	7.62MM AKMS	7.62MM SVD	SA-7 GRAIL	86MM ATGL RPG-7	9MM FM PISTOL
CO HQ	3	6	9	1	1	1	1	1	3		3		4
MTR RIFLE PLT (3)	3	96	99	9	9	9	9	18	63	3		9	12
TOTAL	6	102	108	10	10	10	10	19	66	3	3	9	16

*DEPLOYED FROM BATTALION AS SITUATION DEMANDS.

The TOE authorizes an 11-man squad. The size of this squad will vary from 7 to 11 men depending upon the AFV authorized the company. This squad is contrasted to the current US mechanized infantry squad with a TOE authorization of 11 men as a fixed standard.

The three principal support weapons (not vehicular mounted) with a platoon are the 7.62mm LMG (RPK, the PK, or the PKM), the 85mm antitank grenade launcher (ATGL) RPG-7, and the SA-7 GRAIL. There may be three SA-7 GRAIL missile launchers in each company. Each squad has a two-man team qualified in firing the RPG-7. One rifleman in the first squad of each platoon is equipped with an SVD sniper rifle in lieu of the AKM's. From the headquarters section the political officer and technical officer may occupy seats in a BMP of either the second or third platoon when combat losses or personnel shortages have resulted. This arrangement allows the opposing forces commander to use the headquarters squad as a fighting element. The headquarters squad normally provides command post/observation post protection for the company commander.

The motorized rifle company is normally reinforced with a tank platoon from the tank battalion organic to regiment. This platoon has four medium tanks, one LT, three NCO's, and twelve men. Each of these medium tanks has a four-man crew.

Mission

The missions of the motorized rifle company in the offense are to penetrate the US defenses, develop the attack, neutralize defending enemy troops by fire, destroy or capture enemy equipment and weapons, seize and consolidate defensive positions, repulse counterattacks, and pursue a withdrawing force.

Other missions which may be given to the motorized rifle company include:

- Operating as an advanced security detachment within an advanced guard (usually sent out by the regiment). A typical advanced detachment consists of a motorized rifle company reinforced by a tank platoon, a chemical reconnaissance team, an engineer squad, and an antitank squad. In this situation the company commander would be subordinate to the battalion commander who commands the advanced guard.
- Acting as flank or rear detachment on a tactical march. In this situation the company's attachments are approximately doubled and the company commander takes his orders from the commander of the division's flank or rear guard.
- Conducting a reconnaissance in force (usually sent out by division).
- Providing security during halts.
- Participating in tactical airmobile operations.
- Acting as an assault group in an attack against fortified position.
- Operating as the regimental reserve.

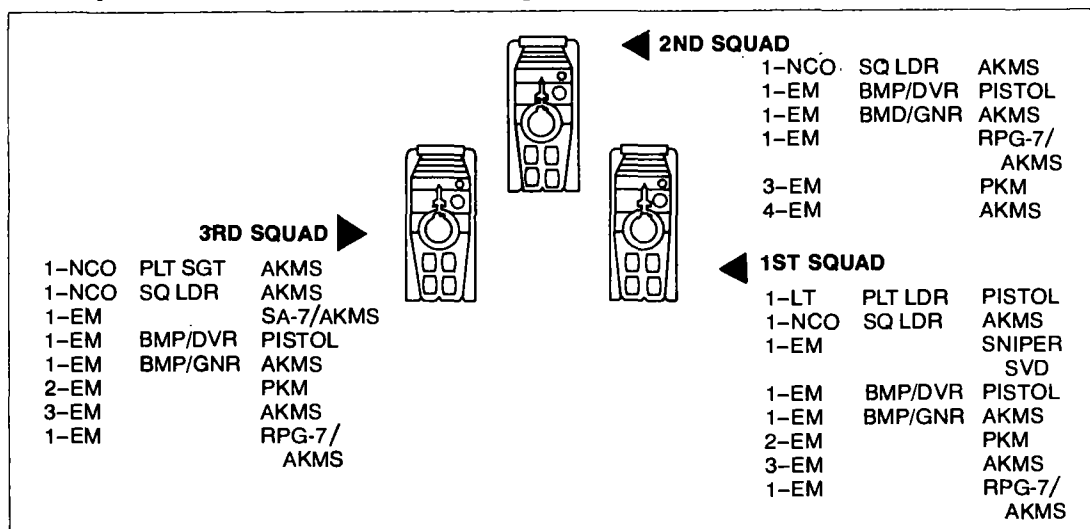
The company will be reinforced as required for these missions.

The Squad

The motorized rifle squad normally consists of eight infantrymen armed with six AKMS assault rifles, one RPG-7 ATGL, and two 7.62mm LMG RPK or PK. The squad rides in the cramped passenger compartment in the rear of the BMP. Sitting back-to-back on adjustable benches and facing the sides of the vehicle, the soldiers are positioned so that each is in front of one of the airtight firing ports. When he is ready to fire either his PKM or AKMS, the infantryman first locks his weapon securely into his assigned firing port and then picks up his target by looking either through a front-angled vision block on the hull above his firing port or directly through a small vision port immediately above the barrel of his gun. The latter arrangement permits him to use his weapon's fixed sights. The vision ports are equipped with defoggers for cold climate operations, and an exhaust system attached to each weapon removes any toxic fumes. Small bags attached to the infantrymen's weapons collect spent brass.

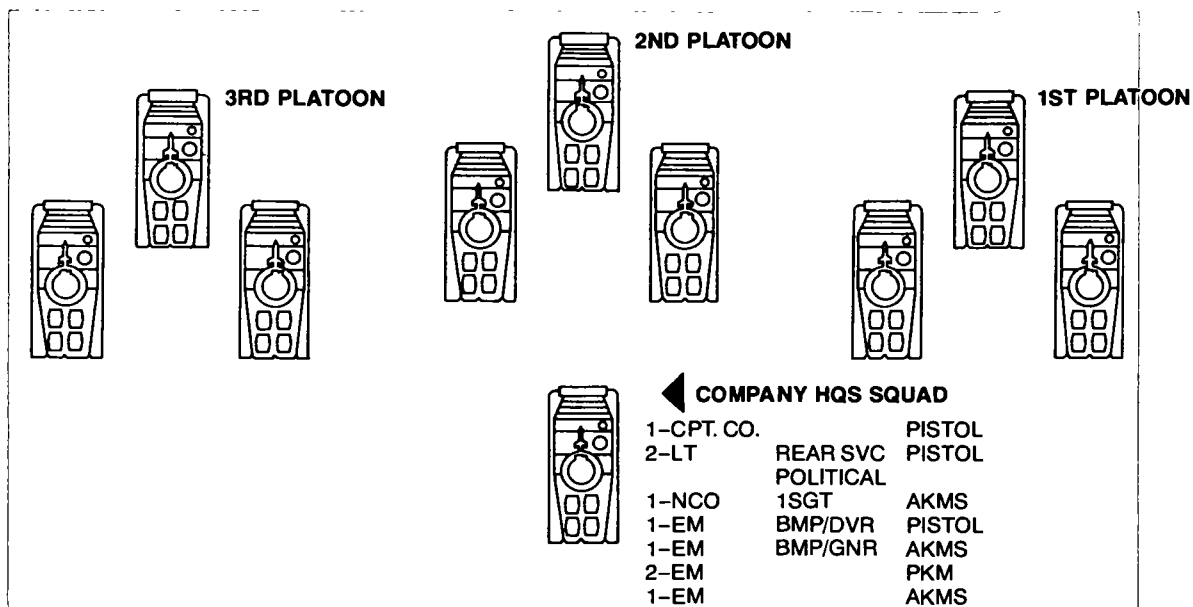
The Platoon

At the lower echelons, opposing forces combat organization is based on a triangular concept. Thus, there are three motorized squads in a motorized platoon, and the platoon commander rides with one of the squads. At the platoon level, one infantryman is armed with the SVD sniper rifle.



The Company

The motorized rifle company has three platoons and a headquarters element. The commander controls his unit primarily through the use of radio, although strong emphasis is placed on maintaining radio silence, on communications discipline, and on communications security while frequent rehearsals of planned operations are conducted to further reduce the need for radio communication. The company operates on one net; however, it has the capability to monitor the battalion command net. During dismounted operations, the company command net is established with the platoon leaders using manpacked radios. During mounted operations, the vehicular radios are used, although communication during those operations may be via either manpacked or vehicular radio. The company also has certain other means of communication: wire (used in the defense), signal flags, colored pyrotechnic flares, and liaison runners.



Section 2—The Offense

General

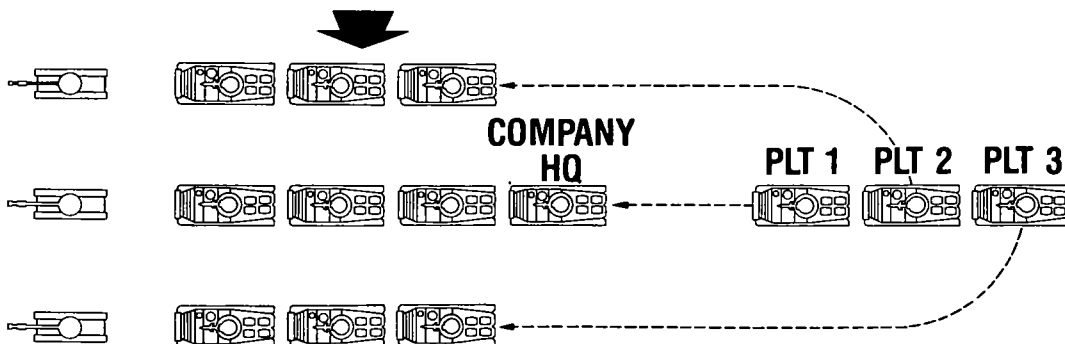
All units of the opposing forces employ the three major offensive actions as described in chapter 2. Control measures for the motorized rifle company are essentially the same as those for a US company. The major difference is that a motorized rifle company is largely dependent upon the battalion's reserve to influence the battle.

Because it is small, compact, and incapable of sustained operations, the motorized rifle company normally fights as part of the battalion.

Important Points About the Motorized Rifle Company

- Entire force is motorized.
- AFV's are amphibious.
- Each squad has one RPG-7 antitank weapon.
- The BMP mounts a 73mm smoothbore gun.
- The BMP carries four AT-3 SAGGER missiles and a 7.62mm machinegun.
- All vehicles have night-vision devices.
- All vehicles have built-in CBR protection.

PLATOON COLUMNS



Planning for the attack takes place at regimental headquarters. Battalion commanders exercise detailed command and control over their companies. Company commanders and platoon leaders are permitted little flexibility during operations. When possible, the attack is initiated from a mounted company formation or, if necessary, with platoon columns on line. The company commander applies the principles of cover and concealment to lead his company as near to the US force as possible without firing. As the objective is neared, the US force is taken under fire by organic and automatic weapons mounted on the armored vehicles and by infantrymen through individual firing ports. The company will deploy into battle formation only if the attack is slowed by US resistance or by terrain. The infantry remains mounted until the last possible minute before dismounting to conduct the assault on foot. As the battle formation nears the line of contact, the infantry withdraws to the rear of the tanks until the minefields and obstacles are breached. Once through, the infantry redeploys into battle formation to assault the US defenses. Depending upon the mission given by the battalion commander the company may bypass pockets of resistance to continue the attack deep into US defenses; in this case, the battalion's second echelon would mop up. If US defenses in the objective area are weak, the infantry of the first-echelon companies may remain mounted throughout the operation. Once the assault has been successfully made through the objective area, the company remounts and immediately reforms into a column to increase the speed of the advance to pursue the fleeing US force.

Conceptually, the motorized rifle company fights as an entity within a battalion formation; there is limited fire and maneuver within it. The company normally attacks with three platoons abreast. When contact is made, one platoon will be used to maintain a base of fire while the other two platoons attempt to flank the strongpoint and hit it in the rear by exploiting a gap in the US defenses. The motorized rifle company never conducts a frontal attack unless forced to do so.

Conduct of the Attack

In battle formations tanks will normally lead the attack. They will deploy in sections or as a platoon and operate 200 to 300 meters out in front of the motorized infantry. The tanks will maintain lateral spacing of 50 to 150 meters.

Frontages, for planning purposes, with the motorized rifle company in the attack, will be assigned a "zone of action" of 400 to 600 meters. Platoons will deploy on line with a distance of up to 100 meters between platoons. Within the platoon each vehicle will attempt to maintain a space of approximately 50 meters between vehicles.

Unlike US forces, opposing forces of regimental size and larger use echelons in their tactical operations. Each echelon is assigned a mission and objectives. Reserves are designated but the reserve force is normally smaller than a comparable sized US force. Echelons are not normally employed at battalion and company level. These units operate as part of the echelon of a larger force. The battalion commander will maintain only a small force as his reserve. The battalion commander's primary concern will be to maintain the momentum. He will rely on the following echelons to eliminate any pockets of resistance.

Dismounted Assault

If an offensive is carried out with conventional weapons only, opposing forces formations will seek open flanks and attempt to bypass US strongpoints to maintain the momentum of their advance. They will avoid close country, if possible, and tanks will lead the advance. A dismounted attack is most likely to occur when the US position is continuous and unbroken with good obstacles well covered by fire of all types. A dismounted assault is very unlikely on a nuclear or chemical battlefield. In attacking at night troops normally attack dismounted in front of their tanks.

The dismounting area will be either in defilade or at the limit of effective fire from US infantry antitank weapons, and it may be as much as 500 to 1,000 meters from the objective. When the order to dismount is given, the AFV's will slow down to about 5 kmph, and the infantry will leave their vehicles either through the hatches of the BTR-60 PB or BTR-50 PK or the rear doors of the BMP. The commander exists through his own hatch. The driver and gunner stay with the vehicle with the gunner in command. The dismounted troops run past the AFV's which continue to move forward slowly, and form a skirmish line immediately behind the tanks. They will advance to the objective at a brisk pace firing their small arms on the move. The AFV's follow at a distance of 100 to 400 meters, moving in bounds and using fire and maneuver between themselves. In the case of the BMP, the tank vehicle halts to fire its main armament. When the infantry closes with US forces at about 25 to 30 meters, the leading platoons will throw grenades and then charge. Conventional small arms fire is used to neutralize US antitank weapons.

Dismounted Formations

The line or skirmish line is normal for the assault, while a file is used for crossing minefield gaps or for rapid cross-country movement. Spacing between individual soldiers is laid down as 6 to 8 meters with a squad frontage of some 50 meters. Support-type weapons such as the RPK and RPG-7 are grouped in the center to insure tight control by the squad leader. The dismounted squad varies from seven to nine men depending upon the type AFV or carrier used by the company.

The rifle platoon will normally advance in a single skirmish line on a front of up to 200 meters. Fire and maneuver between squads will be rare. The platoon commander normally moves just behind the center squad.

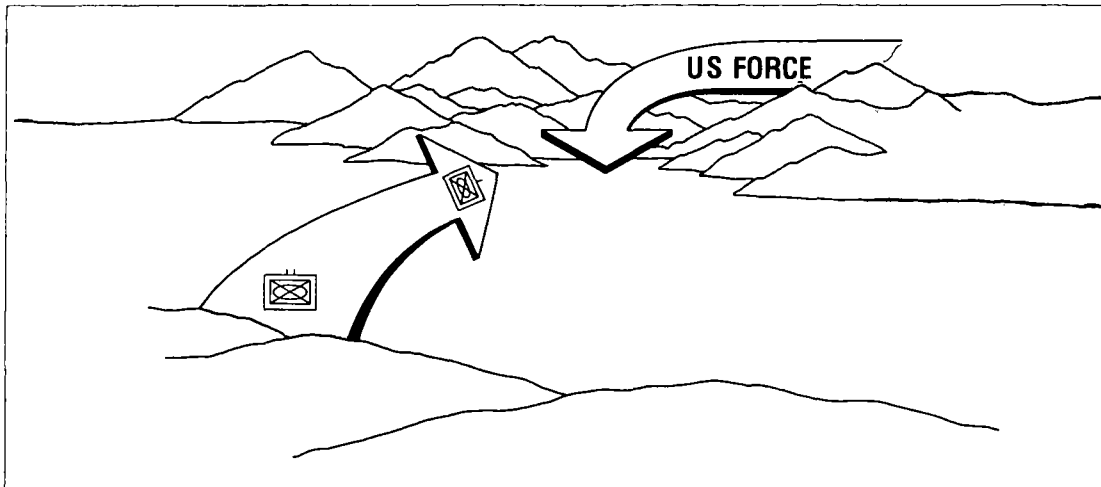
A dismounted company will normally advance all three platoons up on a frontage of up to 800 meters, though one platoon is sometimes kept mounted as a mobile reserve. The company commander moves behind the center platoon with his radios on the company and battalion command nets. Companies are separated by 100 to 200 meters.

Meeting Engagement

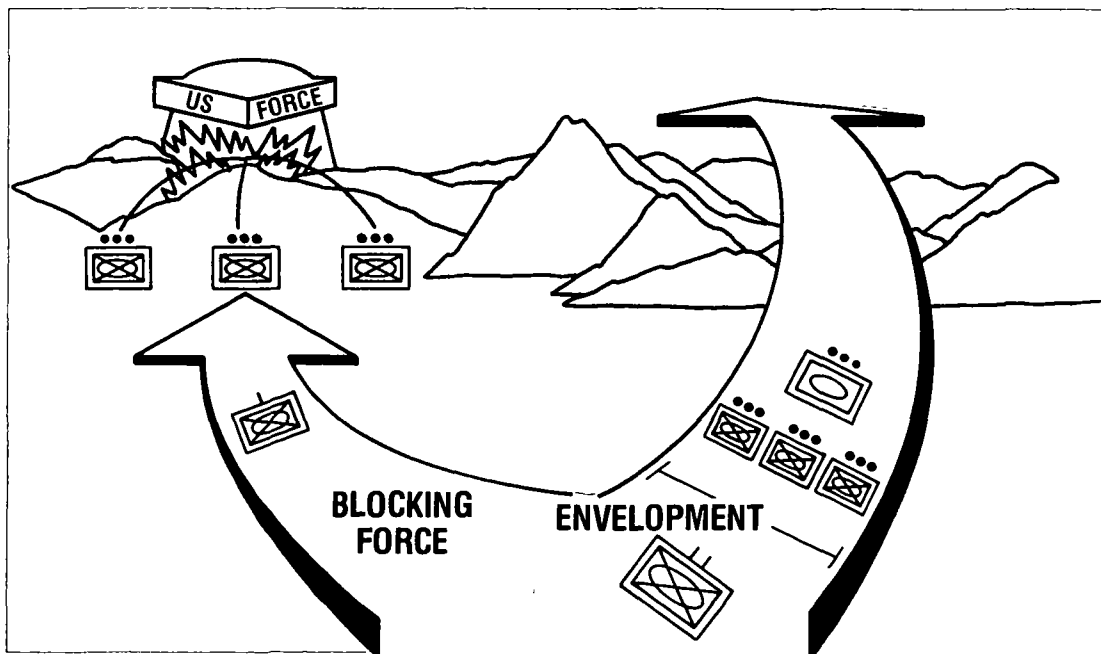
Because of its size the motorized rifle company will conduct this operation as part of a battalion or larger force. As such, it may be part of the main body with a

routine flank security role until contact is made, or it could be deployed as the advance guard company. When acting in an advance guard role the company is responsible for the security of the battalion main body. Other missions include:

- Neutralizing enemy reconnaissance.
- Protecting the column from surprise attack.
- Clearing light opposition from the designated route of march.
- Acting as a base of fire for offensive action by supporting units in the clearing of heavy opposition.
- Reporting on terrain and CBR conditions.



Regardless of which role it is given, the company is controlled by the battalion. Upon contact, the battalion commander must make a timely estimate and give the company a mission if the operation is to be successful. Time is expected to be the critical factor.



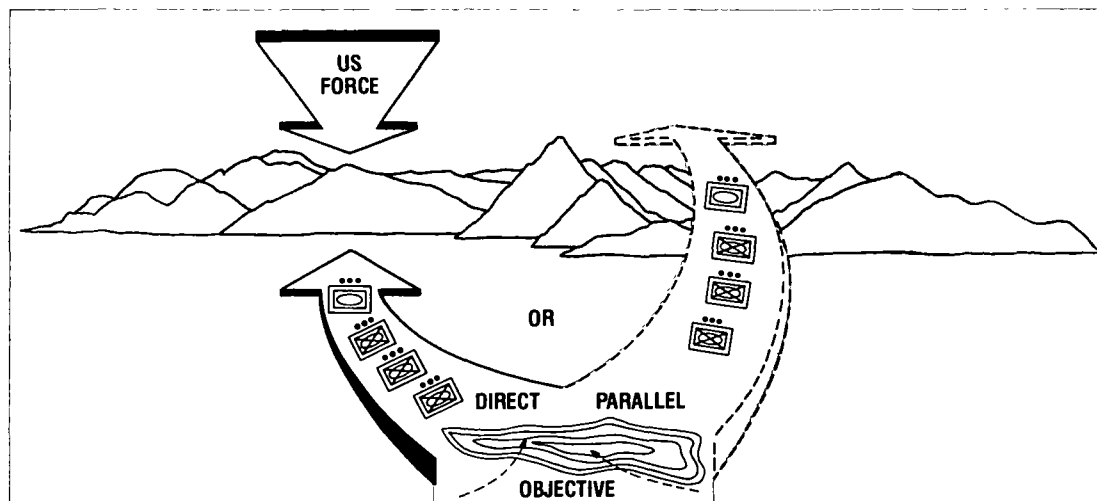
The Breakthrough

The company, because of its limited size and firepower, cannot conduct an independent breakthrough operation. It participates in such an operation as part of a larger unit. Within the framework of this larger echelon, the company will be responsible for the destruction of a specific enemy grouping or seizure of a specific area of the defense. To assist the company in its mission, higher echelons may provide it additional firepower such as an artillery battery, one or two tank platoons, a mortar platoon, and antitank elements. Additional fire support would be provided from regimental assets and higher headquarters.

Normally the company will attack with all three platoons abreast on a frontage of 500 meters in a conventional situation and 800 meters in a nuclear situation. Should the company use two platoons forward and one in the rear, the frontage will narrow to 300 meters. The company will remain mounted as long as possible to seize those defensive positions which were subjected to preparatory fires before the defenders can recover. The company will continue the mounted attack as far into the defensive area as possible, creating gaps through which exploitation forces can follow. If the mounted attack is unsuccessful because of strongly defended positions offering accurate antitank fire, the motorized rifle troops will dismount as close to the enemy defensive lines as possible, and using the supporting fire from attached tanks and their own organic AFV, move to within 100 meters of the defensive position. The last 100 meters will be covered in a run. Handgrenades and bayonets will be used to overcome the US force's resistance. After the position has been taken, the motorized riflemen will remount their AFV's and continue the attack into the depths of the defense, regardless of the progress of adjacent units. If a US force counterattacks to prevent further opposing force advances, the motorized rifle company halts and assumes an all-round, hasty defensive posture to repel the attack.

Pursuit

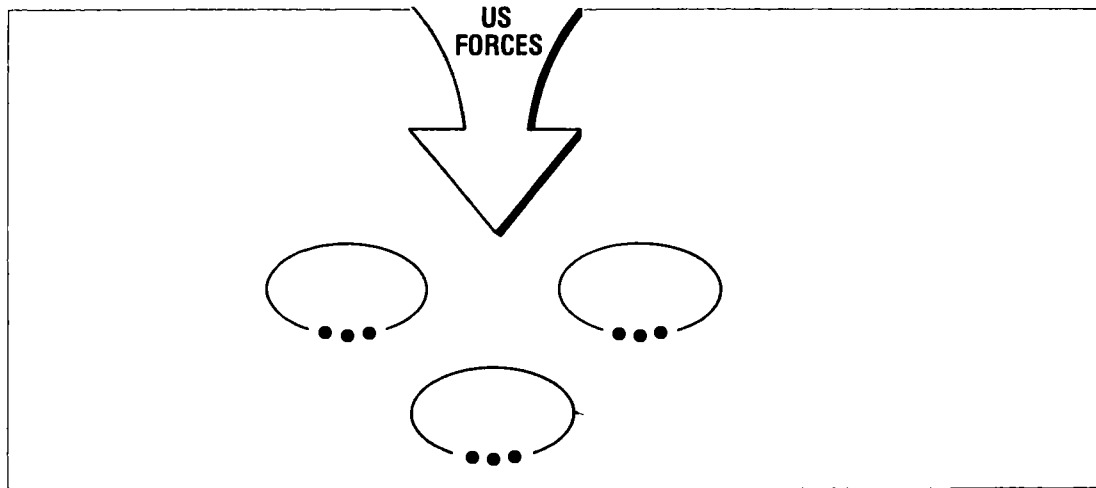
The pursuit-type operation is employed as a follow-on to the meeting engagement and breakthrough. Although the motorized rifle company takes part in only one form of pursuit at a time, a combination of direct and parallel pursuit can be conducted by a higher echelon unit.



Section 3—The Defense

Mission

When the opposing forces go on the defense, the motorized rifle company is assigned a frontage of 1,000 to 1,500 meters depending upon the terrain. Its main mission is to defend an assigned position with the objective of destroying the US offensive strength by attrition through constant resistance from defensive positions in the fire pocket defense.



Defensive Organization

The motorized rifle company is part of either the battalion's first or second echelon. If it is part of the first echelon, it usually deploys two platoons forward and one platoon in the second echelon. As a rule, the company does not have a reserve unit. When the company is in the battalion's second echelon, all three platoons are on line covering the width of the battalion's defensive area.

Commander's Responsibility

The company commander is responsible for establishing a defensive system of fires from tanks, antitank guided missiles, armored fighting vehicles, and squad small arms. This fire is distributed to concentrate on the most dangerous avenues of approach. Weapons are dug in and camouflaged if time allows to reduce their vulnerability to the US fire.

Fighting Positions

Individual fighting positions are dug in and continuously improved until a trench system is established. This trench system consists of two main trenches: The first trench runs across the company's front and is occupied by two forward platoons; the second trench is in the rear and is occupied by the third platoon and the company headquarters. Trenches are camouflaged and improved to add secondary trenches for squads and communications between the main trenches.

Distances between platoons are approximately 350 meters. Squads are spaced 40 to 60 meters apart. The platoon's defensive area in a nuclear environment usually covers between 300 to 400 meters across the front and extends to a depth of 200 to 300 meters, making the company's defensive area approximately 1,000 meters across the front and 500 meters in depth. These distances would be approximately halved under nonnuclear conditions. This defensive area varies with type of terrain, reinforcements, and whether or not the company is astride the main avenue of approach.

Antitank Weapons

The motorized rifle company depends on antitank weapons for its main defense. These weapons are dispersed along the main area of defense. Tanks are dug in, antitank weapons are placed between them, and obstacles created. Defensive fires are concentrated on the most likely avenue of approach. The company strongpoint is usually centered on the platoon in the second main trench.

When gaps exist between company defenses, outposts, patrols, and ambush sites are used to cover these areas.

In addition to TOE weapons and equipment, the motorized rifle company is expected to employ other defensive measures near the line of contact much like a US company. These measures are natural obstacles, wire, mines of all types, constant use of deceptive operations, and use of smoke emitters such as those contained on the T-62 tank.

Withdrawal

Opposing forces include a withdrawal plan in their defense. When a withdrawal is required by the regiment, the motorized rifle company's main mission is to delay the advancing forces long enough for the main body to establish a new main defensive belt. The withdrawal usually begins at night. The main body breaks contact while the motorized rifle company provides covering in the form of a limited counterattack with heavy concentration of artillery fires. When the company has completed its mission, it fights its way back to the main line of defense and assumes a position in the regiment's second echelon of defense.

Chapter 4

THE TANK COMPANY

Section 1—Organization

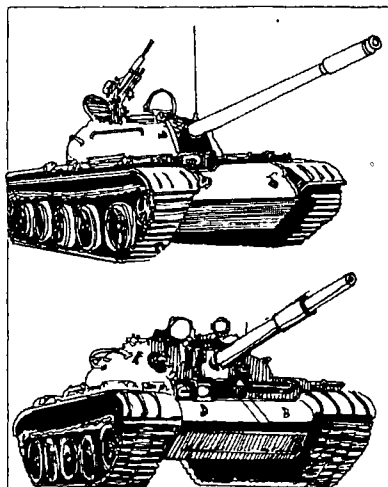


TABLE OF CONTENTS

Section 1

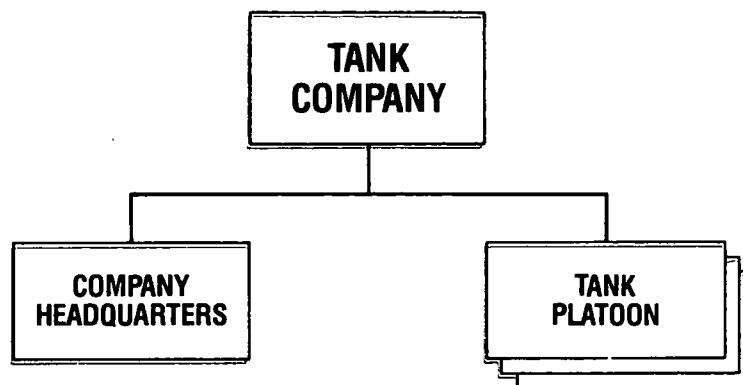
Organization	4-1
General	4-1
Personnel, Weapons, and Equipment	4-1
Mission	4-4
Command and Control	4-4
Tactical Formations	4-5

Section 2

The Offense	4-7
General	4-7
Frontages	4-7
Forms of Attack	4-7
Meeting Engagement	4-7
Breakthrough	4-8
Pursuit	4-9

Section 3

The Defense	4-10
Tasks	4-10
Frontages	4-10
Defense Positions ..	4-10
Conduct of the Defense	4-11
The Withdrawal	4-12



General

The tank company is a highly compact mobile organization designed primarily to operate as part of a tank battalion. As the regiment is the basic unit of maneuver in the opposing forces, a tank company is best regarded as a fire team. The company may also be employed separately to reinforce a motorized rifle unit or to become the armor component of a unit organized for a specific combat or reconnaissance mission. Depending upon its subordination, the platoons at the company may consist of either three or four medium tanks. In tank battalions subordinate to motorized rifle regiments the platoons have four tanks. In battalions subordinate to tank regiments and independent tank battalions, the platoons have three tanks assigned.

Personnel, Weapons, and Equipment

TANK COMPANY OF THE TANK BATTALION TANK REGIMENT AND INDEPENDENT TANK BATTALION

UNITS	PERSONNEL			WEAPONS & EQUIPMENT										
	OFFICER	ENLISTED	TOTAL	APC BMP	7.62MM LMG PKT (BMP COAX)	SAGGER (AT-3) BMP LCH-R	76MM GUN (BMP)	7.62MM PKM	7.62MM AKMS	7.62MM SVD	SA-7 GRAIL	86MM ATGL RPG-7	8MM PM PISTOL	
CO HQ	3	6	9	1	1	1	1	1	3		3		4	
MTR RIFLE PLT (3)	3	96	99	9	9	9	9	18	63	3		9	12	
TOTAL	6	102	108	10	10	10	10	19	66	3	3	9	16	

*DEPLOYED FROM BATTALION AS SITUATION DEMANDS

TANK COMPANY OF THE TANK BATTALION, MOTORIZED RIFLE REGIMENT

UNITS	PERSONNEL			WEAPONS & EQUIPMENT																
	OFFICER	ENLISTED	TOTAL	TK MDM 55 62 72	TK 7.62mm MG PKT	SAM SA-7 GRAIL*	9mm PM PISTOL	7.62mm RIFLE AKM												
CO HQ	2	7	9	1	1	3	2	7												
TK PLT (3)	3	45	48	12	12		3	45												
TOTAL	5	52	57	13	13	3	5	52												

*DEPLOYED FROM BATTALION AS SITUATION DEMANDS.

Main Tanks. The main medium tanks are currently the T-55 and T-62. T-54 and other obsolescent types may still be used in reserve formations. The latest tank, the medium tank T-72, has appeared with firstline units in some areas but as yet is not fully deployed.

Armament. Because of the limited ranges and accuracy required of the opposing forces tank main armament, a simple stadiometric rangefinder and a single target designation are used. The opposing forces method of target engagement in a tank vs tank battle is normally by platoon. It is possible that laser rangefinders could be introduced in the future.

TANK ARMAMENT

TANK	GUNS	MACHINEGUN		
		COAXIAL	BOW	AA
T-54	100mm Rifled Gun	7.62mm	7.62mm	12.7mm
T-55	100mm Rifled Gun	7.62mm	7.62mm	12.7mm
T-55A	100mm Rifled Gun	7.62mm		12.7mm
T-62	115mm Smoothbore	7.62mm		
T-62A	115mm Smoothbore	7.62mm		12.7mm
T-72	122mm Smoothbore	7.62mm		12.7mm

Ammunition. Because of the relative shortage of artillery in a tank formation, up to 50 percent of a tank's combat load will be HE which cuts down on the quantity of antiarmor ammunition available to each tank.

TANK AMMUNITION

TANK	APFSDS	APHE	COMBAT LOADS		
			HEAT	HE	TOTAL
T-55		23	3	17	43
T-55A		23	3	17	43
T-62	14		7	19	40
T-62A	14		7	19	40
T-72					40

Rate of Fire. The T-62 can fire four to six rounds per minute when static and up to four rounds per minute on the move, but it is unable to sustain even this very slow rate of fire since it only has six rounds of ammunition readily available in the turret. The remaining ammunition is stored lower in the tank. The T-62's main armament is most effective up to 1,500 meters, beyond which hit probability diminishes and penetration deteriorates rapidly.

Opposing forces main battle tanks are comparatively light by Western standards, around 36 tons compared to 47 for the US M60A1. On favorable terrain all medium tanks are capable of speeds in excess of 40 kilometers per hour. T-62 has a cruising range of about 500 kilometers.

Snorkeling. All main battle tanks are capable of deep wading using a snorkel to depths of 5.5 meters. The slender combat snorkel is invariably stowed on the rear deck when not in use. Preparation for fording normally takes place in an assembly area approximately 2 to 5 kilometers back from the river line, with a final check just before the crossing site. The snorkel may be erected, and the tank sealed in about 15 minutes by well-trained troops. Riverbed reconnaissance to find and mark suitable deep-wading crossing sites is accomplished either by frogmen or from the surface. This operation takes time, and it may reveal likely crossing sites to US forces. Tank snorkels are particularly vulnerable to artillery fire while moving from the preparation area to the water-crossing site, and they may be damaged by obstacles during the crossing. Once the tank has been prepared for snorkeling, it cannot fight, as the gun barrel is blocked and the turret locked. When action is imminent on the far bank the snorkeling equipment can be blown off using explosive charges, and the gun may be fired immediately after the tank has emerged from the water, but the tank cannot be committed to sustained combat until desealing has been carried out. This takes about 20 minutes.

Vulnerability. Considering their low overall weight these main battle tanks are well-armored, especially the turret and front. Nevertheless, they are vulnerable to 105mm APDS up to 2,000 meters and 120mm APDS up to 3,000 meters in range. *Major vulnerabilities in their tank design lie in the external fuel tanks and in the storage ammunition next to fuel in the tank interior. There is a high risk of fire and explosion after even a minor hit.* These tanks have considerably lower silhouettes than most of their NATO counterparts, but a limited gun depression of only 4 degrees hampers them when in hull down positions.

Nuclear Conditions. Opposing forces have devoted a great deal of attention to the efficiency of their tanks under nuclear conditions. Developments in this area

include air filtration, alarm systems, and a radiation alleviating lining for the crew compartment.

Smoke. Both the T-55 and T-62 and most probably the T-72 have a smoke dispenser system which can generate a dense smokescreen behind the tank by fuel injection into the exhaust. The system can remain in operation up to 10 minutes at a time, and the smoke persists for up to 2 minutes.

Crew. With the exception of the T-72, the current main battle tanks have a crew of four: commander, gunner, driver-mechanic and loader. The T-72 has a crew of three: commander, gunner, and driver-mechanic.

Mission

The mission of a tank company as part of a tank battalion or in conjunction with units may be assigned as follows:

- Meeting engagements.
- Reconnaissance.
- Attacks from the march column.
- March security.
- Forcing or crossing water obstacles.
- Advance guard.
- Defensive operations.
- Deliberate attacks against prepared and hasty defenses.

When tank companies reinforce motorized rifle units, their missions may be to:

- Provide additional antitank firepower.
- Lead attacks.
- Provide an armored reserve.

Command and Control

The tank commander is in immediate command of a tank. The company commander and platoon leaders command their own tanks. The gunner is normally second in command of the tank. The company commander, normally a captain or senior lieutenant, is responsible to the battalion commander for the efficiency of his company. He is responsible for accomplishing the assigned mission and fire control of his company during operations.

The company commander controls the tank company by radio, visual and audio signals, and pyrotechnics in the employment of well-rehearsed tactical drills. The individual tank commander is the only crewmember authorized and trained to use the tank radio except in emergencies.

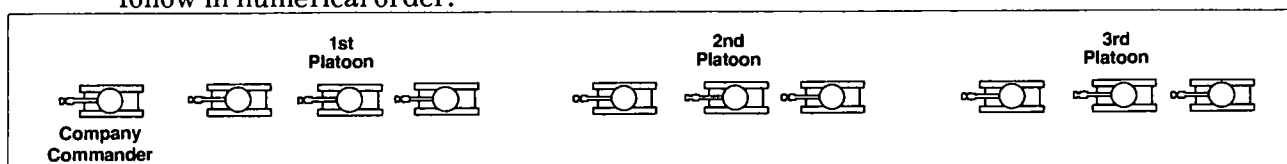
The tank company commander has two radios in his tank: a very high frequency set for communications within the company and a high frequency set for communications with the battalion commander and other tank companies. Normally, radios in tanks other than command tanks are operated only in the receiving

mode. Control of the command radio net is retained at battalion level. When the company operates as part of a battalion, there will probably be no company net. All tanks will monitor the battalion net and receive orders from the battalion commander.

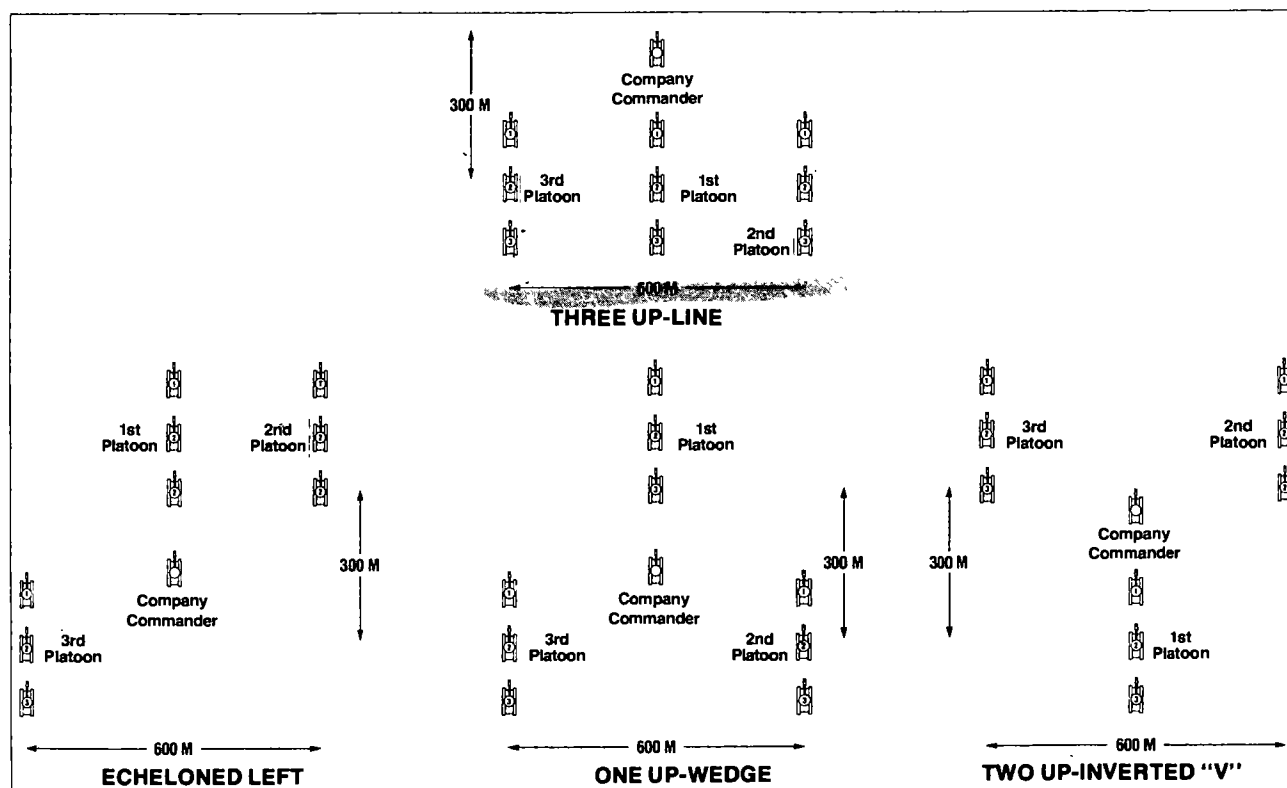
Tactical Formations

During combat operations the tank company moves in well-rehearsed formation appropriate to the mission. The place of each tank in the platoon and company is fixed. Tank companies train for orderly and rapid redeployment from march and for precombat. Combat formations are usually given by flag or hand signal during the march or in precombat situations and by radio code words after contact has been made.

During the march a tank company moves as quickly as possible on roads in column formation. The company commander leads the column, and the platoons follow in numerical order.

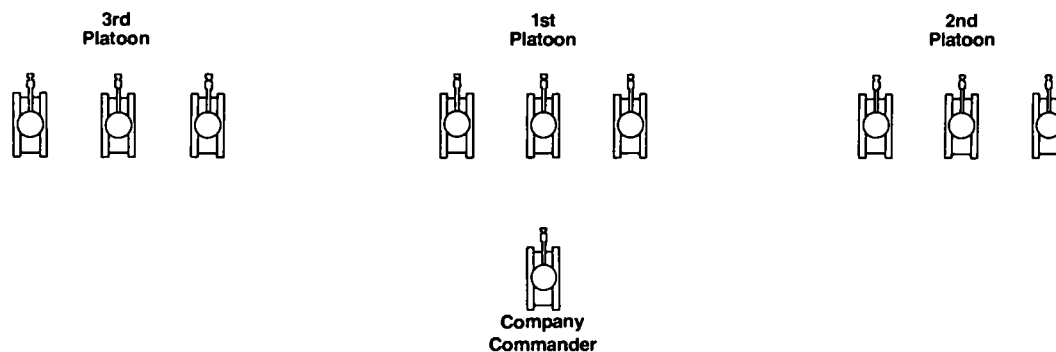


Closer to the line of contact, companies move in different configurations than the platoon column, depending on the terrain and the direction of the threat. These are called precombat formations and are used to achieve dispersion when near the US positions or crossing minefields. The first platoon by numerical designation within the company is known as the guide platoon.

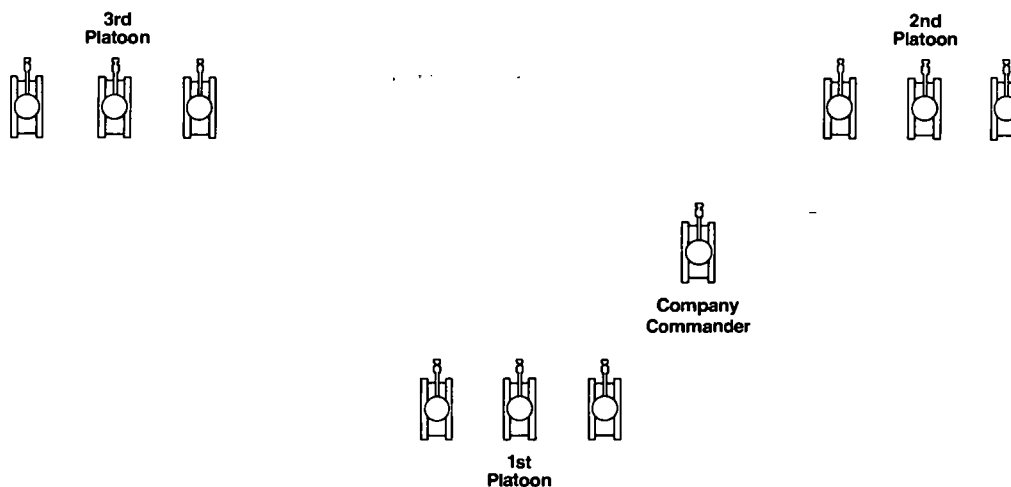


Combat formations are determined by the terrain and the enemy disposition. Basically, tanks are formed in line with the company commander behind the line to be in position to control his command.

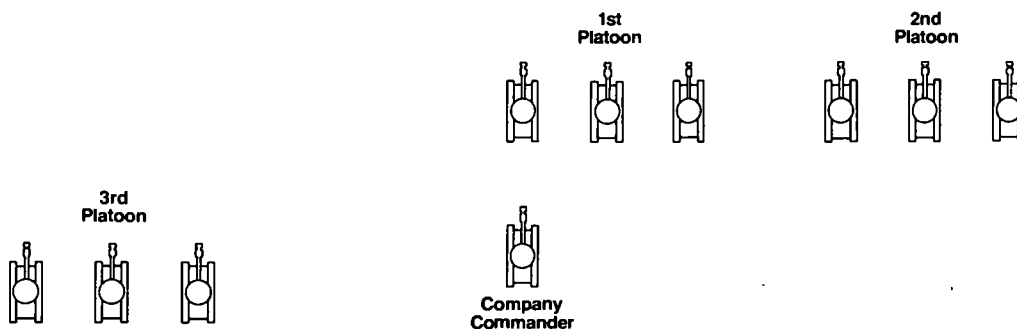
- The company assaults in combat formations at maximum speed. In "combat line" there are 100 meters between tanks. The company commander travels no more than 300 meters behind the guide platoon commander.



- The "two up" formation may be used to add depth to an assault. In the "two up" formation tanks are echeloned so that all may fire in the assault. A similar formation exists with only one platoon up, in which case, the guide platoon leads.



- An echelon formation is used to protect an exposed flank.



Section 2—The Offense

General

Opposing forces doctrine emphasizes that offensive action is the basic combat activity of tank units. The aim in each offensive operation is to concentrate enough firepower to destroy enemy defenses on a narrow frontage and to penetrate his position in depth. Once an offensive gains momentum, opposing forces doctrine calls for relentless pressure, day and night, to exploit initial success. This is designed to fragment use of tactical nuclear weapons by the US.

A tank company will usually take part in offensive operations as part of a battalion and is supported by other combat arms. A tank company may be given one of two missions. When the US boundaries can be clearly identified, the mission is to destroy the enemy within a particular sector or strongpoint. When US boundaries are not clearly defined, the tank company will be ordered to seize and hold key terrain until given a further objective. These missions will take place in the following types of operations:

- The meeting engagement.
- The breakthrough.
- The pursuit.

Frontages

A tank company normally attacks on a frontage of 800 meters with 100 meters between tanks and 100 meters between subunits when under nuclear conditions. In nonnuclear conditions the company frontage may be reduced to 500 meters with 75 meters between tanks and subunits. A platoon frontage is not greater than 200 meters.

Forms of Attack

A tank company in either the first or second echelon has two basic forms of attack.

- The frontal attack with US forces having no assailable flank. Considerable effort is made to neutralize the US force by means of nuclear, chemical, or conventional fires before a frontal attack.
- An enveloping attack, either close or deep. A close envelopment is directed against the flank of the US force and is supported by fire of units attacking frontally. A deep envelopment is directed against the flanks or rear of a US position to a depth beyond the range of direct fire support weapons of the frontally attacking units. An enveloping force is reinforced for independent actions and coordinates its tactical operation by radio with units attacking frontally. Close and deep envelopments are usually supported by preplanned artillery fire.

Meeting Engagement

Upon engagement, the battalion commander will assess the situation and transmit his orders to the main opposing forces tactical formation. While deploying, the tank company commander can expect to receive information as to :

- His mission.
- Mission of adjacent units.
- Artillery support.
- Signals to be used during the assault.

The company commander then transmits missions to the platoon commanders while the company moves into combat line. The attack is conducted as a one-phase operation with a single objective. The meeting engagement is completed when the enemy is destroyed, is forced into a defensive position, or withdraws. The tank company may then pursue, or temporarily defend, depending upon the success of the engagement.

Breakthrough

In breakthrough operations a tank company can be reinforced by, or reinforce, motorized rifle units. In either case, its tactics would be the same.

Before the attack, the company commander receives oral orders from the battalion commander and makes an estimate of the situation. He conducts a reconnaissance with his platoon leaders and commanders of attached and supporting units. Platoon commanders reconnoiter the terrain with tank commanders if there is time. Coordination is effected for fire support.

There are two methods of conducting a breakthrough operation:

- From the march against ill-prepared US forces.
- By deliberate assault against prepared defenses from a holding area.

Generally, breakthrough operations from the march are dynamic, spontaneous, and unpredictable and as such, will not be discussed here.

In the holding area, a tank company commander prepares his company for combat while regimental orders are being issued to the battalion commander. Tanks are refueled, serviced, and resupplied with ammunition. After receipt of the battalion commander's order, reconnaissance is conducted and orders given to platoon commanders.

Advance. A tank company moves forward on order with its attachments.

- The move from the holding area is timed so that the line of departure is reached at the time specified in the battalion order. If the attack is to be preceded by a nuclear strike against forward US positions, arrangements are made to protect the attacking force from the strike.
- The company deploys into precombat formation approximately 2 kilometers from the line of contact. Platoons deploy into combat formation approximately 500 meters before reaching the line of contact.

The Assault. The tank company, when leading the assault, moves at high speed, firing on enemy weapons and personnel in the main battle area. When required, engineers prepare passages through antitank obstacles forward of the defenses, and company tanks equipped with mine ploughs make hasty gaps in

minefields. If there are no gaps in the minefield and mine ploughs are not available, the company advances through the minefield in precombat formation.

- Under cover of supporting fires, tanks, and attached motorized rifle units attempt to penetrate the defenses and then continue the advance. A tank company supports adjacent units but does not deviate from its own direction of attack. Momentum is maintained even when supporting elements are slowed or halted.
- In the attack, tanks fire on the move, from short halts, or at the halt. The preferred method is to fire on the move, which provides immediate firepower without slowing the tempo of the advance. The short halt is used to fire one aimed round from the main gun or several bursts from the machinegun. When tanks encounter a target of importance to the mission, concentrated fire at the company is used. Tanks halt behind available cover and continue to fire until the target is neutralized.
- Attached motorized rifle units normally follow the tanks by 100 to 500 meters. Motorized rifle troops remain mounted whenever possible and try to maintain the same speed as the tanks, firing through the ports of the AFV's during the assault.
- After overcoming the forward positions of the US defense, tank units will become the spearhead of the advance and be given priority of artillery support. US strongpoints are bypassed. If the advance of a company is halted and a flanking maneuver is not possible, the company commander calls for additional fire support. Tanks then move under cover of supporting fire in their assigned direction as far forward as possible. Radiological or chemical contaminated areas do not slow the tempo of the advance; these areas are crossed rapidly or bypassed.

Exploitation. After overrunning a US defensive position, a tank company commander orders his tanks to continue the attack. If resistance collapses completely, the company forms into march formation and continues in pursuit of the withdrawing US forces.

Reserves. A tank platoon can be used as a battalion reserve during offensive operations. Its tasks are exploitation, mopping up bypassed pockets of resistance, or the support of motorized rifle units as an immediate antitank defense. During the offensive, the reserve platoon will follow the battalion commander one tactical bound behind the combat formation. The battalion commander transmits missions to the reserve platoon, which usually moves through a gap in the battalion line or from the flanks.

Pursuit

A tank company with its mobility and firepower is ideally suited for pursuit. Company commanders are required to initiate pursuit immediately upon indication of US withdrawal. ***The opposing forces goal is to turn a limited US withdrawal into a full-scale retreat through pursuit by units in contact. Pursuit is continued day and night and is terminated only on orders of the higher commander or because of strong US resistance.*** Reinforcement and employment of a tank company in pursuit will be similar to that in a meeting engagement.

A reinforced tank company participates in pursuit as part of a larger force. The pursuit may be direct, parallel, or a combination of both, in which case it will be a regimental operation. Probable missions for a tank company engaged as part of a larger force in pursuit operations are:

- Reconnaissance.
- March security detachments.
- Tank ambush.
- Seizing key terrain on US withdrawal routes.

Section 3—The Defense

Tasks

A tank company is used in defense in one of the following roles:

- Holding an area.
- A counterpenetration or counterattack force.
- Reinforcing the antitank defense of a motorized rifle unit, normally a battalion.
- As a fence to cover an area between CBR contaminated areas.
- A tank ambush.

Frontages

When employed in the defensive role as part of a battalion, the tank company defends a strongpoint approximately 1,000 meters wide and 500 meters in depth. There are normally 300 meters between platoons. The arc of observation for an individual tank is restricted to the field of vision as seen through the gunner's and commander's sights without moving the turret. This gives an arc of approximately 20 degrees. Tanks are normally assigned an individual arc of fire between 10 and 15 degrees. There are normally 150 meters between individual tanks.

Defense Positions

A tank company commander considers the following in selecting defensive positions:

- Maintaining tank fire density while retaining all-round defense.
- Reverse slope positions.
- Mutual support within company and with adjacent units.
- Secondary fire positions for tanks with covered routes from primary positions.

Given these conflicting requirements, the tank company commander usually places his platoons two forward and one back. The rear platoon may be to the center, right, or left rear as dictated by the terrain and US threat. Motorized rifle units give local protection to tanks and fill in gaps within the positions, using machineguns and handheld antitank weapons. Linear formations are acceptable in positions where the tank company is in the second echelon. Within the defen-

sive position, a "wandering tank" may be designated to move between gaps and flanks to confuse US estimation of the number and location of opposing forces tanks.

A tank company firing from prepared positions is expected to open fire at 1,500 meters and achieve a 50 percent kill ratio. The opposing forces consider that US tanks will attack at an average speed of 15 kilometers per hour. They estimate that each opposing forces tank in the company will be able to fire 10 to 12 rounds during a US attack. Each tank is therefore credited with a potential of five or six US tank kills. It is projected by the opposing forces that a tank company, after 30 percent casualties, can still theoretically counter an attack of 30 to 40 US tanks.

Conduct of the Defense

The initial US probes of the defensive positions of the opposing forces will be met by the "wandering tank" within the company defensive position. In this way, the main firing positions of the company are not revealed to the attacking US force.

When the US launches its main attack, the tank company commander concentrates the greatest part of his tank fire on the most threatening portion of the US assault. Fire is opened when the US troops reach the forward edge of the company area of responsibility, approximately 1,500 meters. Key points on the company front are designated for areas of concentrated tank fire. Attached infantry and machineguns engage US infantry and armored personnel carriers (APC) with the aim of isolating the infantry from its supporting armor.

If the US attack fails, the company commander may shift his firepower against units assaulting adjacent positions, if penetration is made into the tank company position, counterattacks are not attempted by this company. Surviving tanks remain in position and support counterattacks ordered by higher headquarters. Only on order of the battalion commander will company tanks leave their preassigned positions to join a counterattack. Similarly, penetration by the US into an adjacent position is countered by fire and not by counterattack. Counterattack is normally a function of the battalion or regimental reserve.

A tank company in depth within the battalion position is referred to as the "reserve company." This company, as well as having a primary role to hold an area, will have secondary tasks of acting as a counterattack force. This company is also responsible for defense against airborne assaults.

When operating as an antitank defense force subordinate to a motorized rifle battalion, a tank company deploys by platoons. Each platoon deploys within a motorized rifle company area or strongpoint. Reconnaissance is carried out by platoon commanders together with the infantry company commander. Tank platoon commanders give advice on the location and coordination of the antitank defense. The tank company commander remains with the infantry battalion commander during the defensive battle and acts as his antitank defense coordinator.

The mobility and firepower characteristics of armor make the tank company an effective counterattack force. In this role, a company is normally reinforced by

motorized rifle troops. A tank company may be employed as the regimental reserve in this role. It occupies a preferred position in the regimental second echelon of defense.

Exposed flanks, gaps in defensive positions, and US approach routes are considered possible lucrative sites for tank ambushes. Opposing forces regard tank ambushes as effective defensive operations which may be carried out at platoon, company, or battalion level. Tank companies are usually reinforced with additional antitank weapons for this operation. The usual defensive principles are employed in siting tank ambush positions. They are in defilade and well camouflaged. Engagement ranges are at 1,000 meters or less. Surprise is the dominating factor in planning. Small groups of US vehicles may be allowed to pass through the ambush site until a suitable target is selected. Ambushes are sometimes planned to capture arms, equipment, or US soldiers for intelligence purposes.

The Withdrawal

A company withdraws only as part of a battalion operation. It will attempt to break contact normally either at night or during conditions of low visibility, if possible. In theory, withdrawals will take place under cover of artillery and tactical air support. The support is planned at battalion level and coordinated in a regimental plan.

During the withdrawal, the tank company may be employed:

- As a rear march security detachment.
- As a lead march security detachment to lead the rearward moving column.
- As a flank security detachment.
- As a tank ambush unit on US axis of advance.

In each case the company would usually be reinforced by a motorized rifle platoon.

If a tank company is in contact with US forces, it may withdraw with platoons covering each other. Alternatively, the entire company may move simultaneously, covered by another company or the battalion reserve. Once the tank company has broken contact, platoons form into columns. A company column is formed once the company has passed through the positions of the rear march security detachment.

The withdrawal is deemed to be complete once the tank company is redeployed in a new firing position or has taken up a position within a battalion rear area assembly area.

Chapter 5

THE MOTORIZED RIFLE BATTALION

Section 1—Organization

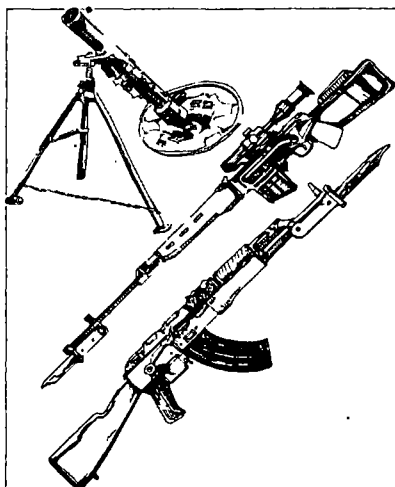
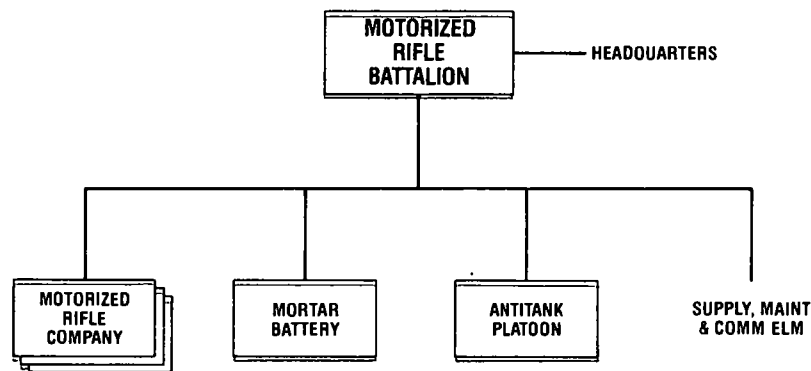


TABLE OF CONTENTS

Section 1	
Organization	5-1
General	5-1
Personnel, Weapons, and Equipment	5-1
Mission	5-2
Command and Control	5-3
Section 2	
The Offense	5-4
General	5-4
Preparation for the Attack	5-5
March Formation	5-6
Frontages and Depths	5-7
Conduct of the Attack	5-8
Mounted Assault Formations	5-9
Meeting Engagement	5-9
The Breakthrough ..	5-10
Pursuit	5-11
Fighting in Built-up Areas	5-12
Section 3	
The Defense	5-12
General	5-12
Types of Defenses	5-13



General

The motorized rifle battalion of the motorized rifle regiment is a completely mobile unit with organic fire support in the form of antitank missiles, antitank guns, and a mortar battery. *The major fighting elements of the battalion are three motorized rifle companies. It is capable of accomplishing a march and conducting a meeting engagement, attacking with a decisive goal and defending stubbornly. It is not a unit in its own right, but really a subunit of the motorized rifle regiment, and depends on the regiment for combat and logistic support.* The battalion is commanded by a lieutenant colonel or a major. He is the primary organizer of the battle and he personally controls the attack.

Personnel, Weapons, and Equipment

			PERSONNEL			WEAPONS & EQUIPMENT																
UNITS	OFFICER	ENLISTED	TOTAL																			
				APC BTR BMP BRDM-2	7.62mm LGM PKT BMP (COAX)	SAGGER (AT-3) BMP LCHR	SAGGER (AT-3) MANPACK	7.62mm GUN (BMP)	7.62mm RCL GUN SPG-9	7.62mm LMG PKM	7.62mm AKMS	7.62mm SVD	9mm PM PISTOL	85mm ATGL RPG-7	120mm MORTAR	SA-7 GRAIL						
BN HQ	4	9	13	2	2				30		57	198	9		4							
MTR RIFLE CO (3)	18	306	324	30	30	30				30		57	198	9	48	27		9				
MORTAR BTRY	4	49	53									44			9		6					
ANTITANK PLT	1	13	14					2		2		13			1							
SUPPLY MAINT & COMM ELEMENTS	1	35	36									30			6							
TOTAL	28	412	440	32	32	30	2	30	2	57	294	9	68	27	8	9						

The Antitank Guided missile (ATGM) Platoon has two ATGM manpack SAGGER AT-3 weapons and two 73mm recoilless SPG-9 guns. SAGGER is a wire-guided missile with a range of 500 to 3,000 meters. The SPG-9 can probably penetrate in excess of 350mm of armor and is assessed as having a maximum effective range of between 800 and 1,000 meters.

The mortar battery has six 120mm mortars. The battery has a headquarters section and two firing platoons. The headquarters section is truck-mounted with the mortars towed by trucks. The mortar battery is believed to carry 240 rounds of ammunition including HE, smoke, and illumination. The 120mm mortars have a range of from 460 to 5,700 meters and are normally deployed between 500 and 1,500 meters from the line of contact. During an attack they follow the infantry in, and if the infantry dismounts, the battery can deploy and give covering fire in about 12 minutes. A mortar battery normally deploys in a single straight line some 150 to 250 meters in length, though occasionally it may be split into two platoons. Although under battalion command, the mortar battery will often receive coordinating instructions and fire missions from the regimental artillery commander.

One tank company is normally attached in both the offense and defense. The tank company will have thirteen tanks. Normally these are suballocated to the rifle company with one tank platoon or four tanks to each rifle company.

For immediate local air defense the battalion relies on concentrated small arms fire, heavy machineguns mounted on the AFV's and the shoulder launched SA-7 GRAIL. The battalion has a total of nine GRAIL's. These will be allocated to each company, usually in groups of three, as the situation dictates.

Mission

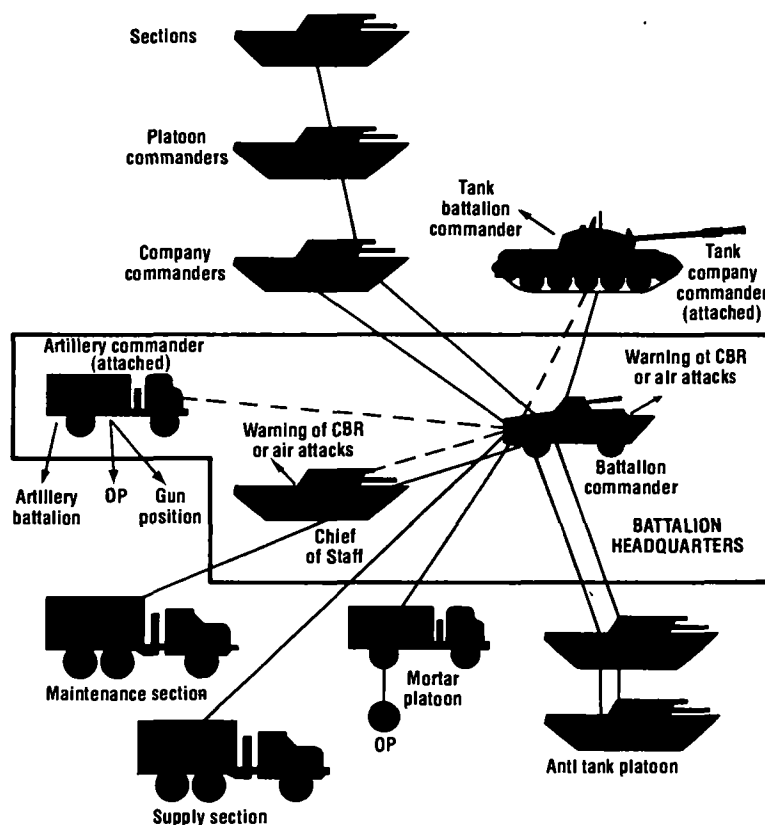
The mission of the motorized rifle battalion in the regimental first echelon is to break through the US forward positions to permit the establishment of a gap that can be exploited. When this is accomplished, the battalion continues the attack as directed either to destroy the US force or overrun its supporting artillery. Second-echelon battalions reinforce and support the first echelon. The tactics employed are essentially the same as for first-echelon battalions. Should the situation occur where there is no lasting contact with US forces, the mission of the motorized rifle battalion is to conduct successive meeting engagements until adequate information is gathered to provide sufficient intelligence for the planning of an offensive operation.

Other types of missions performed by the motorized rifle battalion are:

- Exploit effects of a nuclear or conventional "fire storms" strike.
- Seize or consolidate and occupy critical terrain.
- Destroy US forces in an assigned sector.
- Organize and conduct a position defense within an assigned defensive area.
- Provide cover and security for a higher echelon conducting an offensive, defensive or retrograde operation.
- Act as a division reserve.

Command and Control

The battalion command AFV is either a BTR-60 PA/PU/PB or a BMP manned by the battalion chief of staff. The battalion commander rides in a BRDM-2 scout vehicle, and the artillery commander may be collocated with him. If engineers or air defense platoons are attached, these commanders would also accompany the battalion commander. The commander will move well forward on the main axis of advance where he can personally observe and influence the battle. In the attack he will seldom be more than 500 meters behind his leading companies. In the battalion radio net, all AFV's will be on the battalion command net together with the supporting tanks. Communication with the artillery at this level is accomplished by collocation of commanders.



NOTE: Radio silence is normal during tactical movement. This is made possible by constant rehearsal or drills and detailed orders before an engagement starts. During an offensive, radio traffic is minimized except during assaults. Extensive use is made of hand and flag signals during air and CBR attacks and for target-marking and fire support coordination.

The battalion has a small tactical headquarters with little or no administrative functions. Most military matters are conducted orally, and no permanent records are maintained at battalion. The staff is primarily an operating and supervising, rather than a planning, body. The staff is broken into two groups, a command group and a staff group.

The Command Group consists of the battalion commander, deputy commander for political affairs (political deputy), and deputy commander for technical matters (technical deputy).

- The battalion commander is responsible to the regimental commander for operations; organization for combat; timely supply of weapons, ammunition, petroleum, oil, and lubricants (POL), and food; correct use, care, guarding, and repair of weapons, vehicles, and other equipment; establishment and maintenance of coordination; medical treatment and evacuation; field sanitation and medical reconnaissance; CBR operations; and the tactical and political training of all organic and attached units. Desirable leadership characteristics of commanders stressed by opposing forces include foresight, initiative, persistence, decisiveness, composure, presence of spirit, and the ability to adopt the necessary active and effective measures in a complex and fast-moving situation.
- The political deputy is also a direct commander of all battalion personnel. He functions mainly as the representative of the regimental political deputy, and he exerts a powerful influence over the battalion commander.
- The technical deputy (chief automotive technician) is responsible to the battalion commander and the regimental deputy for the status, protection, and proper use of combat and transport vehicles; procurement of automotive supplies and spare parts; organization of evacuation, maintenance and repair; and technical vehicle training for the battalion.

The Staff Group consists of the chief of staff, operations officer, two clerks, and a chemical specialist.

- The chief of staff is a direct commander of all personnel of the battalion. He is the principal tactical and logistical adviser to the commander and is responsible for the training and readiness of the headquarters for maintenance of control over subordinate units. He often acts as the second in command and he is the only one authorized to issue orders in the name of the commander. His principal duties are to stay abreast of the friendly, and enemy forces tactical and logistical situation, brief the commander on this, and exercise continuous control over actions of subordinate units to insure that they receive timely support.
- The operations officer is the principal assistant to the chief of staff. His main duties include collecting, processing, and reporting tactical and logistical information; organizing the command post; organizing liaison; planning and supervising training; and supervising the execution of operations.

Up to battalion level most command posts also serve as observation posts. They are normally mobile in the offense. In the defense these command posts are normally located at the following distances from the main battle area: platoons—50 meters, companies—300 to 500 meters, battalions—400 to 1,500 meters. The battalion commander independently displaces his command/observation post on the most likely avenue of approach, in a place from which he can best observe the battalion and approaching US forces.

Section 2—The Offense

General

All units of the opposing forces employ the three major types of offensive actions as described in chapter 2.

All major elements of the battalion deploy in echelons. About two-thirds of the total strength is assigned to the first echelon; it is the main attacking force with the responsibility for achieving primary objectives. The second echelon follows the first and focuses on the subsequent objective or other designated tasks. There is no US Army equivalent to the second echelon. Commanders of opposing forces withhold reserves from the main battle without a designated objective until ordered into battle. At a selected time, reserves are then assigned a mission or objective such as the follow-up mission or to meet unanticipated requirements. A battalion may operate as a single echelon in the attack.

The battalion normally receives an immediate mission, a subsequent mission, and an axis of further advance. Missions are coordinated with respect to both area and time. According to opposing forces doctrine, the best support for the adjacent unit's attack is a rapid advance to the front to continue with the offensive spirit. Opposing forces infantry soldiers, including many of the junior commanders, are conscripts. They seek to compensate for a lack of experience and professional expertise by reliance on stereotyped deployment drills. Comparatively little attention is paid to such basic infantry skills as map reading and dismounted minor tactics. With the exception of reconnaissance and protection detachments, motorized rifle subunits seldom maneuver in less than company strength.

Preparation for the Attack

In organizing an attack, the battalion commander directs a number of concurrent operations to preserve the command and facilitate accomplishment of the mission. One of his first tasks is to insure that his battalion area of deployment from a position in direct contact with US forces or from an assembly area at least 20 kilometers from the line of contact is secure from US ground actions until his troops move out for the attack. He is responsible for C&D so that the battalion does not present a lucrative nuclear target. The battalion must be ready to repel a US air attack at all times. He organizes reconnaissance of the movement route to contact, enemy dispositions, and attack objectives. Finally, he coordinates fire support and other logistic support, and he supervises these preparations at company level.

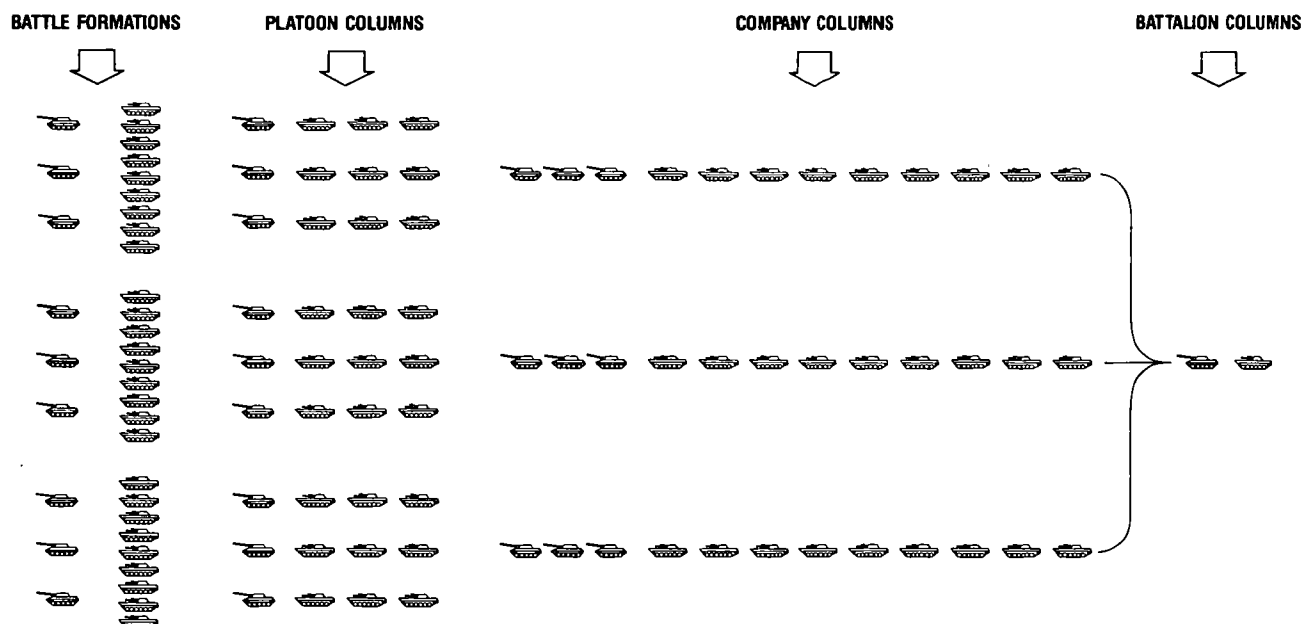
When possible, prior to issuing his attack order, the battalion commander conducts a personal reconnaissance of the area of interest together with the commanders of organic, attached, and supporting units. If the battalion is deployed in a rear assembly area, the commander receives assistance from units in contact. During the reconnaissance he briefs his subordinates on the mission and points out the following terrain features:

- Reference points and their code names along with the assigned direction of the attack.
- US troop dispositions and the locations of weapons, fortifications, obstacles, and proposed passages through these barriers.
- The most advantageous avenues of attack and the zone of the main attack.
- Mortar/artillery concentrations and scheduled targets in the battalion zone. Air targets will be explained, if planned.
- Firing positions for the organic mortars. The schedule of supporting fires is also explained along with signals for their use.

March Formation

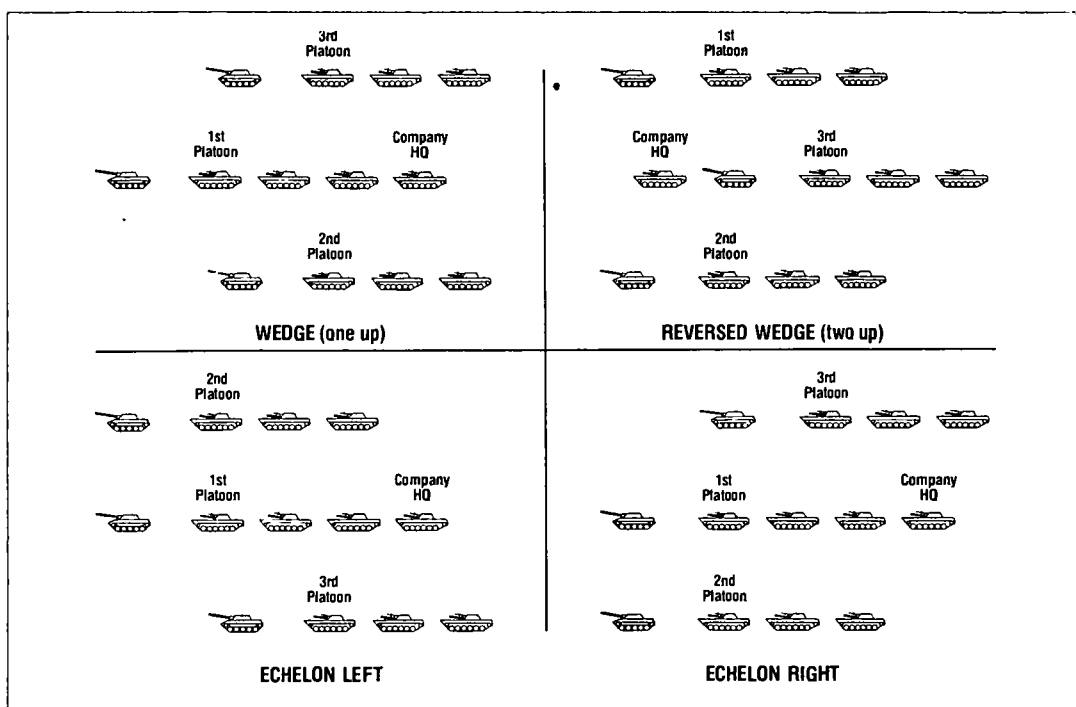
Column formation is the normal formation for road movement, approach marches, and for cross-country travel when not in direct contact with US forces. After a successful engagement units will resume movement in column as early as possible to maintain speed and momentum. Vehicle intervals are 15 to 50 meters except when passing through a contaminated area or when under air attack. Then both vehicle interval and speed are increased. For tactical cross-country movement vehicle distances may increase from 50 to 100 meters. Road movement speeds for mixed columns are by day 20 to 30 kmph, by night 15 to 20 kmph, and cross-country 10 to 15 kmph. Speeds of up to 40 kmph are used for crossing contaminated areas. Short halts of 20 to 30 minutes are made after every 2 or 3 hours of road march. Vehicles will halt at the roadside without breaking march formation. Longer halts are normally only arranged during forced marches of 24 hours duration or more, or in a CBR environment when partial decontamination is ordered. Marches will be executed primarily at night or under conditions of reduced visibility. All measures for camouflage and march discipline are strictly observed.

Precombat subunit columns are used for tactical movement cross-country before deploying into battle formations. Approach march formations are used to make the troops less vulnerable to US artillery and aircraft and to speed deployment while maintaining a high speed of advance and tight control. They are also used for assault river crossings. A motorized rifle battalion will form three company columns, each of which may then deploy into platoon columns as shown below.



There are three main variations of the column formation as follows:

- Wedge (one up)—center column ahead of two flanking columns.
- Reversed wedge (two up)—the two flanking columns are ahead.
- Echelon right (left)—the column on the threatened flank is held back.



The battalion may form into a line of companies and move forward in one echelon in an assault against a weakly defended position or when making a secondary attack over a wide frontage.

Normal organization for the attack will be in two echelons. The first echelon consists of two of the three rifle companies reinforced with tanks. The second echelon contains the third company that may be reinforced by tanks if they were not all included in the first echelon. A tank reserve is not normal at battalion level.

Combat engineer sappers may be attached to attacking rifle companies when minefields or barriers are expected. Special mine-clearing tanks may be used where necessary.

Frontages and Depths

A battalion making a main effort will have an attack zone 1,000 to 1,500 meters wide with a depth of up to 3 kilometers. The second echelon normally is about 800 meters behind the first echelon and follows the company making the main effort. A battalion making a secondary attack will have an attack zone of from 1,700 to 2,300 meters. In both cases the attack zone may be the same as or less than the frontage actually assigned the battalion.

A company normally attacks on a frontage of 500 to 800 meters and usually attacks with three platoons abreast preceded by the attached tank platoons. The company may echelon its platoons or employ them in a wedge formation if there is a threat to the flank.

A platoon normally attacks on a frontage of 150 to 250 meters with all squads on line. The platoon may echelon its squads or employ them in a wedge formation.

Conduct of the Attack

The motorized rifle battalion conducts the attack as part of the motorized rifle regiment, or, when so attached, as part of the tank regiment. It may be in the first or second echelon, or it may be detached and employed as an advance guard (suitably reinforced), or it may also be employed as part of the division reserve.

Although a motorized rifle battalion may participate in any of the basic maneuvers contained in chapter 2, the battalion normally conducts either a penetration or an envelopment in an attack. ***The main objective in a penetration or an envelopment is to get into the US rear areas and destroy the continuity of the defense.***

Opposing forces motorized rifle troops remain mounted until forced out of their AFV's; thereafter, the AFV's follow and support the assault with machinegun fire from defilade-type positions. A company usually dismounts as a unit, except in those rare cases such as an advance guard action where one or two platoons remain mounted to conduct an envelopment.

Opposing forces use fire and maneuver within the maneuvering forces when under heavy US defensive fire, but they prefer to advance rapidly and simultaneously. ***Remember that they feel that the tank is still the most important weapon on the battlefield and will lead initially in all offensive situations except in very close country or urban areas, during assault river crossings, and sometimes at night.*** Tanks advance rapidly, fire on the move, and give opposing forces speed and shock action in the attack. Additionally, the tank main gun reduces targets of opportunity on the way for the infantry who follow at a distance of 100 to 300 meters. The battalion also relies on its organic mortars to deliver covering fires during its movement to the final coordination line.

The battalion has no organic reconnaissance element. Battle reconnaissance patrols are organized and dispatched by companies, either on their own initiative or on orders of the battalion commander. When companies are not in contact, the battalion dispatches battle reconnaissance patrols to determine US locations, strength, and activities. Companies also dispatch battle reconnaissance patrols whenever committed to action, beginning with the approaches to US defensive positions, and they continue these throughout the attack. Primary objectives are information on the terrain trafficability, covered and concealed routes of approach, and location of US weapons. Patrols range in size from two men to a platoon.

Opposing forces stress speed and shock action in an attack over fire and maneuver. Primary emphasis is placed on penetrating US defenses so as to carry the battle to the US rear areas rather than seizing and consolidating on terrain objectives. Their assaults will not necessarily be directed to the key defensive terrain; instead, the battalion attempts to push through weakly defended areas and leave the capture of strong points and key terrain to succeeding echelons. Opposing forces commanders concern themselves less with the survival of their units than with rapidly opening holes through each defensive line they encounter. Opposing forces consider that exploitation of these holes will benefit their objectives sufficiently to offset the increased risk of losing or decimating entire units through attrition or

capture. Opposing forces believe that these tactics will so disrupt a prepared defense that they will be able to penetrate 12 to 15 kilometers in 6 to 15 hours, and maintain an average rate of 3 to 4 kmph thereafter. An opposing forces unit becoming combat ineffective is replaced in its entirety.

If the motorized rifle battalion is attacking as part of a large-scale offensive, an artillery and mortar preparation normally precedes the assault. In other planned assaults an up to 1-hour preparation normally will be fired before the attack is launched. By doctrine, nuclear fires may be included in a large-scale operation. If speed, shock effect or surprise are delayed or lost by waiting for the preparation, opposing forces can also be expected to attack without the normal preparatory fires. When US positions have been effectively neutralized by nuclear, chemical or conventional artillery attack, motorized rifle troops remain mounted during the assault. Both tanks and AFV's will then move at high speed to decrease their vulnerability to US antitank weapons. Opposing forces try to maintain a 50 to 100 meter interval between vehicles.

Mounted Assault Formations

These formations consist of the line, wedge, reversed wedge, and echelon right (left). If strong resistance is met within the depth of motorized rifle troops, they may leave their vehicles and fight dismounted; but the tendency to push on forward as fast as possible by passing isolated pockets of resistance and exploiting the firepower, mobility, and shock action of their tanks and mechanized vehicles to the maximum. Follow-on subunits will attempt to penetrate these gaps and maneuver to the flanks or rear. *Opposing forces doctrine stresses this offensive spirit for its psychological effect for their own troops and its accompanying demoralizing effect on US troops.*

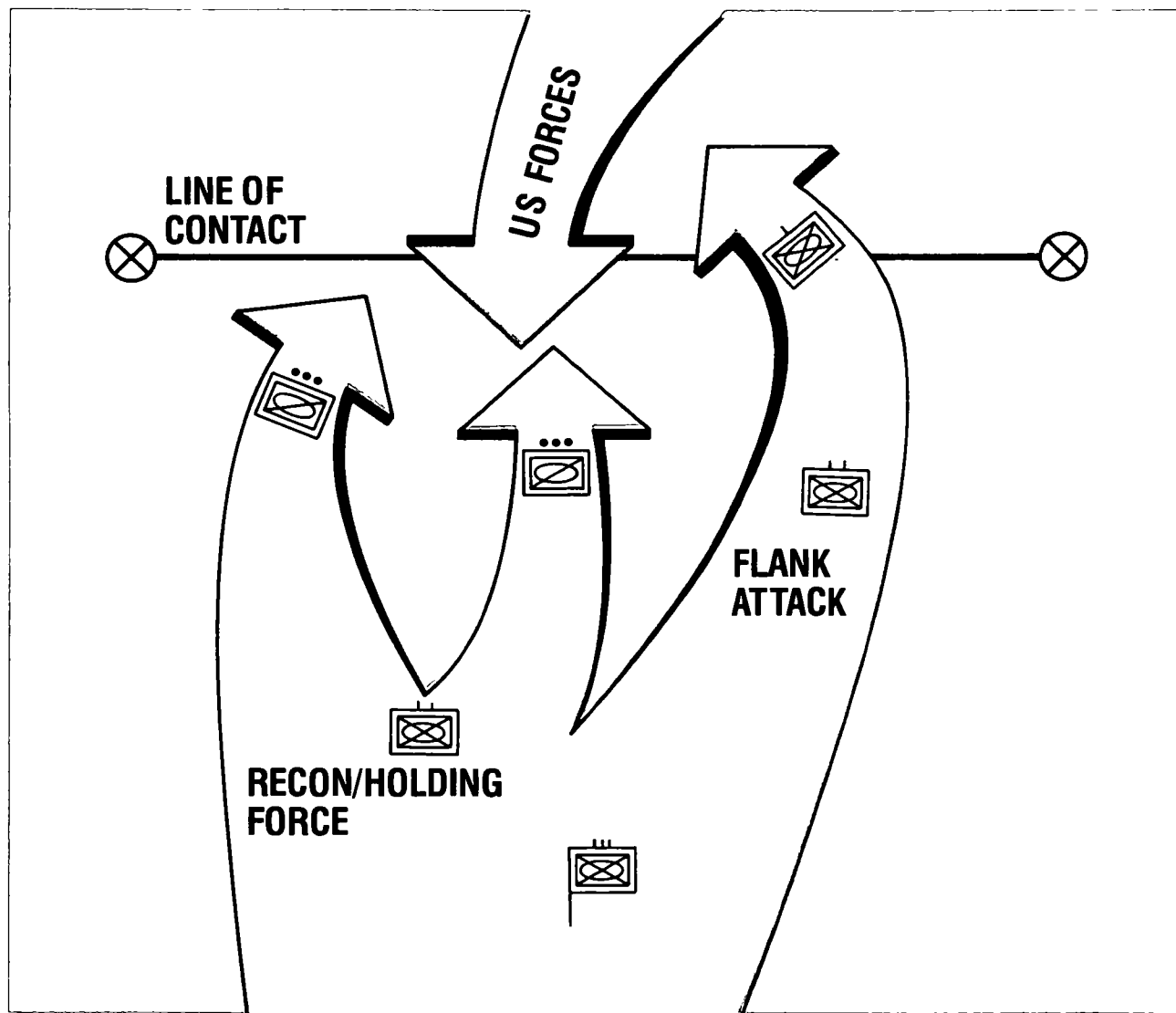
US reserves may be met in a meeting engagement or repulsed by tanks and AFV's firing at the halt. In the case of a meeting engagement in the rear of US positions, the opposing forces troops will normally remain mounted unless US troops counterattack in superior numbers, or strong antitank weapons are encountered.

The second echelon of the battalion, normally one company, stays mounted during the attack. It will move by bounds from cover to cover, up to 3,000 meters behind the first echelon, ready to exploit success, destroy bypassed groups of US forces, and repulse counterattacks. Second-echelon units will usually remain in column formation until committed.

Meeting Engagement

Once reconnaissance elements of an advance guard or forward detachment have discovered the direction and strength of the US force, this forward element will deploy from the line of march and act as a blocking and fixing force to secure a line of deployment for the rest of the battalion main body. The battalion commander quickly decides on the axis of the main thrust and the form of maneuver (frontal, flanking or encircling) attack. The holding force carries out a frontal attack without delay to limit US deployment. This attack will be pressed until stopped either by casualties or by obstacles. Succeeding elements of the battalion

on arrival will deploy from the line of march and feel out a flank in an attempt to envelop the US force. If a US battalion or larger unit is met in a meeting engagement, the opposing forces would establish a frontal attack with a battalion and call for reinforcements from regiment and division.



Fire support will begin as early as possible to disrupt US deployment and will include the battalion organic mortars. These fires may be augmented by fire of the towed or SP howitzers from regiment. If the US opposition is sufficiently strong to warrant a regimental attack, the division artillery may supply a multiple rocket launcher battalion. Opposing forces also make use of armed helicopters with rockets, ATGM's and machineguns. If US forces withdraw, the opposing force battalion will immediately start a pursuit operation.

The Breakthrough

Tanks are used to lead the attack in the breakthrough. Normally, each rifle company will have one platoon of tanks attached from the battalion tank company. Tanks, accompanied by infantry, slow down to maximum speed for the

terrain, or about 10 to 25 kmph. Tanks open fire at about 1,500 to 2,000 meters, though good first round hits are less likely over 1,500 meters. Priorities of engagement for tank gunners are ATGM's, tanks, and infantry antitank rocket launchers.

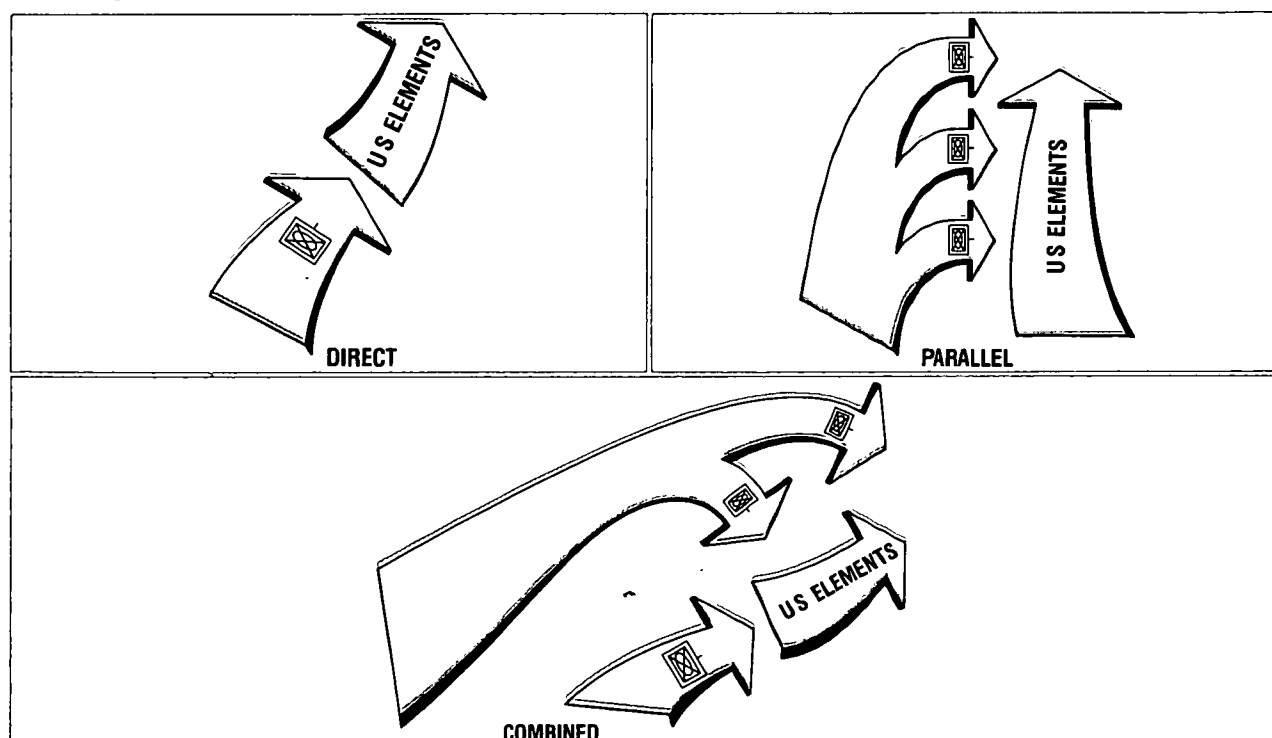
The battalion's organic mortars usually fire a preparation for the breakthrough. Artillery is normally used in breakthrough operations supporting division elements. DAG's and RAG's are formed for specific operations and allocated for specific tasks. If the battalion is part of a regimental breakthrough operation, then a RAG of two or more artillery battalions will normally support the battalion.

Breakthrough operations are normally planned by the CAA commander and executed by divisions. Breakthrough operations will be discussed in detail in chapter 9, The Motorized Rifle Division, and in chapter 10, The Tank Division. An opposing forces battalion will normally attack a US company.

Pursuit

Opposing forces doctrine stresses that decisive defeat of a US force can only be achieved by vigorous and continuous exploitation of tactical advantages. The pursuit phase begins when US forces are routed or when they break contact in a pre-planned withdrawal. All opposing forces commanders have a duty to maintain contact with decisive action and are expected to take up the pursuit with further orders.

Pursuit may be direct or on the same axis as withdrawing US forces, on a parallel axis, or, most commonly, a combination of the two.



A battalion in the pursuit normally follows directly with one company and sends two companies or a flank in a combined pursuit. These companies on the flank overtake the retreating column and attack from the march to cut off withdrawal and destroy US forces piecemeal.

A pursuit may be supported by the use of a heliborne/airborne battalion operation. Opposing forces are rapidly expanding their fleet of helicopters, including troop lift—the HIP, an armed HIND-A, and the heavy lift HOOK. See section 6, chapter 14 for an expanded treatment of helicopter/air assault operations.

Fighting in Built-up Areas

In a potential battlefield in northwest Europe a great many cities and towns exist. It will be difficult for opposing forces to avoid built-up areas. Since this type of fighting takes time and slows the advance, doctrine calls for them to bypass a built-up area if the terrain permits unless it lies on a vital route. When this course is adopted, the area is encircled, blocked, and finally captured by second-echelon forces. Only if bypassing is impossible will first-echelon units carry out an attack of a built-up area.

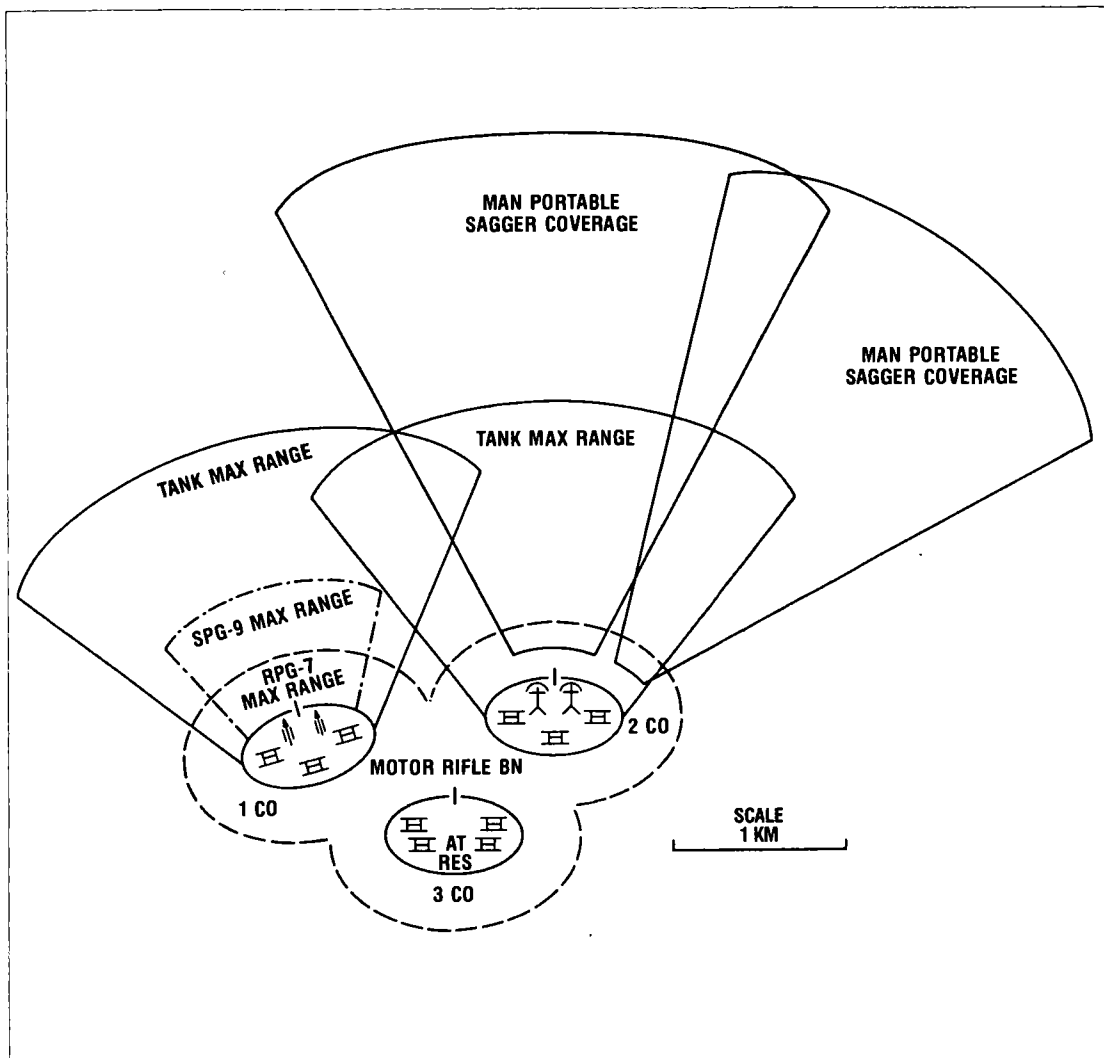
A battalion surprise attack is usually supported by airstrikes, and attacks normally are planned on the flanks and rear. Rapid thrusts are made to seize the most important objectives in the built-up area, to split the area into isolated pockets of resistance, and then to destroy them piecemeal. A helicopter force may be employed against a town.

A deliberate attack on a built-up area is preceded by mortar and field artillery bombardment and by air strikes. Direct fire weapons, sometimes including large caliber guns, are attached to the assaulting companies and may be used in preparatory fires. The normal attachment of a tank platoon to a motorized rifle company continues in this type attack. Reconnaissance, demolition, and assault or sapper parties are also attached and are to infiltrate the defenses. Captured objectives are consolidated, and the remaining defenses are destroyed piecemeal. Once the town has been secured and cleared of US forces, the assaulting forces immediately move out. In a nuclear environment, a town which cannot be captured quickly by conventional means is subject to a nuclear strike.

Section 3—The Defense

General

The defense is a type of combat action employed to hold an occupied area by repulsing an attack by a superior US force, depleting its offensive strength and making it vulnerable to counteroffensive action. An area is defended rather than a line so that vulnerability to US nuclear attack is minimized. Flexibility is obtained by mobility and the maneuver of fires and forces to counter the US attack. Basically, the battalion defense has company strongpoints with intervals covered by fire. *The core of the defense is antiarmor.* The commander is expected to give priority to the siting and mutual support of organic and reinforcing antitank weapons. Digging in will take place, along with engineer development of the terrain to include protective construction, mines, obstacles, and camouflage. In the defense the battalion will use wire communications extensively.



Types of Defenses

Opposing forces use two types of defense in preparation for a US attack: The mobile or hasty defense and the area of deliberate defense. These two types of defense will dictate how a division will employ its regiments and battalions. A battalion in the defense will have a frontage from 5 to 7.5 kilometers.

Mobile defense advantages are:

- Ability to launch manned nuclear, artillery, and air strikes on US forces, thereby destroying their combat power.
- Preparation of "killing zones" to repel counterattacks.
- This defense is prepared in a short time.
- This type of defense allows for separation of units so that US tactical nuclear weapons cannot destroy the majority of combat power.
- After a successful counterattack, opposing forces can quickly resume the offense against a weakened US force.

Disadvantages are:

- This type of defense can rarely be used below divisional level.
- When moving for the counterattack, opposing forces are vulnerable to US nuclear strikes.
- If the counterattack fails, the entire defensive system can crumble.

Area defense, the main characteristics are:

- Positions which are spread out to prevent complete destruction by US tactical nuclear weapons, but are close enough to repel an attacker.
- A defensive system which uses more engineer support in the form of obstacles and improves the protection of troops from US nuclear attacks.
- Antiarmor weapons as the keystone of the defense.

Area defense has the following weak points:

- Maneuvering within an area defense is difficult.
- Launching counterattacks from this defense is difficult.
- This type defense has a tendency to be stereotyped.

When an opposing forces battalion is in the defense, but an attack is not expected, commanders require 30 percent of the troops to be awake during the day and 70 percent at night. Mortars, tanks, and antitank weapons are continuously manned. The right to call for artillery or mortar barrage fire is granted to company commanders. Battalion commanders can call for tank barrage fire. Tanks are usually dug in to make them twice as effective. Dug-in tanks will fire four times as many aimed shots as attacking US tanks. Engineer obstacles, particularly mixed minefields containing antitank and antipersonnel mines, are commonly used by the battalion. Opposing forces realize that nuclear weapons, when used by US forces, extend the area of the battlefield. To defeat a US force using nuclear weapons it is necessary to occupy defensive positions in the most critical sectors and to hold them stubbornly. Therefore, as in the past, opposing forces will cling to occupied positions on a company/battalion scale with very stubborn resistance. They believe that any position can be held, even under the most difficult conditions, by troop stamina, steadfastness, and above all, tenacity. In addition to this, the battalion must counter a US advance with great flexibility in the use of firepower, forces, and equipment.

The principal means of defeating a US force and ensuring the stability of the defense is an efficiently organized and integrated fire plan. The fire plan includes all weapons but its primary emphasis is antitank. A good fire plan in the defense skillfully emplaces weapons to make good tank ambush points on approaches, organizes zones of heavy overlapping concentrations of all fire on the forward edge, on the flanks, and in depth of the position, as well as the ability to concentrate fire rapidly on any threatened flank or sector. The object is to inflict maximum damage on an approaching US force. The fire plan must compel the US force to move into killing grounds for the division commander's nuclear weapons.

Chapter 6

THE TANK BATTALION

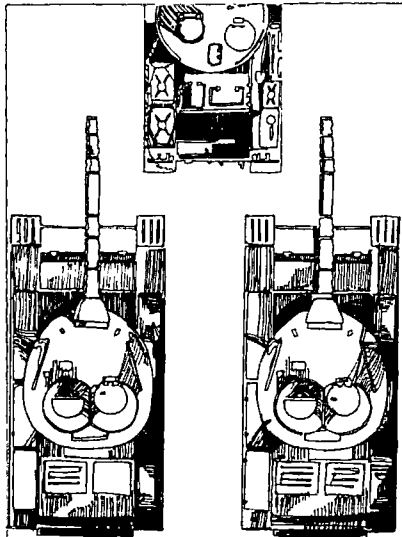
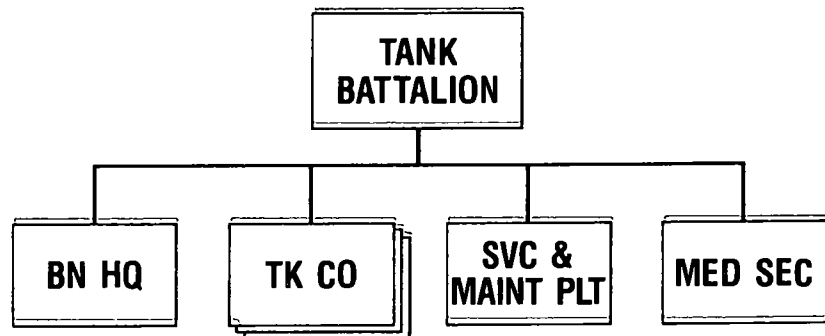


TABLE OF CONTENTS

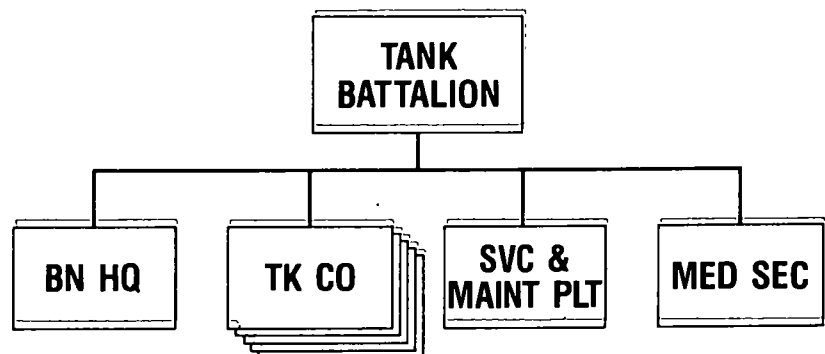
Section 1	
Organization	6-1
General	6-1
Personnel, Weapons, and Equipment	6-2
Mission	6-3
Communications	6-3
Deployment Drills	6-4
Road Movement	6-4
Section 2	
The Offense	6-5
Role of the Tanks	6-5
Conduct of the Attack	6-5
Meeting Engagement	6-7
Deliberate Attack	6-8
Section 3	
The Defense	6-9
Defensive Operations	6-9
Defensive Missions ..	6-9
Frontages and Depths	6-9
Tactics	6-10

Section 1—Organization

TANK BATTALION, TANK REGIMENT AND MOTORIZED RIFLE REGIMENT



INDEPENDENT TANK BATTALION



General

The tank battalion is the main component of the tank regiment and it is also organic to the motorized rifle regiment. An independent tank battalion is also assigned to some but not all motorized rifle divisions. Tank battalions organic to tank regiments have three companies of 10 tanks each for

31 tanks per battalion. Tank battalions organic to motorized rifle regiments have three companies with 13 tanks each for 40 tanks per battalion. The independent tank battalion has five tank companies with 10 tanks each for 51 tanks.

Opposing forces doctrine emphasizes speed, maneuver and massed firepower, and their tanks are designed primarily as offensive weapons. Tank development has therefore emphasized firepower, mobility, and mechanical reliability more than crew protection. To meet concepts of sustained offensives by day and night, their tanks are fitted with night observation devices and obstacle equipment. Because of their essentially offensive role, tanks are expected to engage targets, including enemy tanks, by direct fire at comparatively short ranges, ideally between 800 to 1,500 meters. For this reason penetrative power against armor has priority over accuracy in the weapon system. Techniques of surveillance, target acquisition, and obtaining a first round hit against point targets are relatively crude by Western standards.

Personnel, Weapons, and Equipment

TANK BATTALION, TANK REGIMENT

UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	TK MDM 55 62 72	TK 7.62MM MG PKT	APC BTR BMP BRDM	SAM SA-7 GRAIL*	9MM PM PISTOL	7.62MM RIFLE AKM										
BN HQ	7	4	11	1	1	1		7	4										
TK (CO) (3)	15	120	135	30	30		9	15	120										
SUPPLY & MAINT PLT	1	21	22			1		1	21										
MED SEC	0	3	3						3										
TOTAL	23	148	171	31	31	2	9	23	148										

TANK BATTALION, MOTORIZED RIFLE REGIMENT

UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	TK MDM 55 62 72	TK 7.62MM MG PKT	APC BTR BMP BRDM	SAM SA-7 GRAIL*	9MM PM PISTOL	7.62MM RIFLE AKM										
BN HQ	7	4	11	1	1	1		7	4										
TK CO (3)	15	156	171	39	39		9	15	156										
SUPPLY & MAINT PLT	1	22	23			1		1	22										
MED SEC	0	3	3						3										
TOTAL	23	185	208	40	40	2	9	23	185										

INDEPENDENT TANK BATTALION

UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	TK MDM 55/62/72	TK 7.62MM MG PKT	APC BTR BMP, BRDM,	SAM SA-7 GRAIL*	9MM PM PISTOL	7.62MM RIFLE AKM										
BN HQ	7	4	11	1	1	1		7	4										
TK CO (5)	25	200	225	50	50		15	25	200										
SUPPLY & MAINT PLT	1	25	26			1		1	25										
MED SEC	0	3	3						3										
TOTAL	33	232	265	51	51	2	15	33	232										

Mission

The tank battalion commander assigns one or more of the following missions to his companies:

- Operate as a first-echelon element of a tank battalion as the battalion second-echelon force.
- Operate as the reserve force of a tank regiment or a motorized rifle regiment with or without attachments.
- Operate with attachments as the tank battalion advance guard on the march in anticipation of a meeting engagement.
- Operate as part of the advance guard force of regimental size units.
- Operate as part of a forward detachment.
- Conduct special reconnaissance in force missions for the regiment.

Independent Tank Battalion. An independent tank battalion is organic to some but not all motorized rifle divisions. This unit is directly subordinate to the division commander and may be used as he wishes. This provides the division commander flexibility in conducting combat operations.

Communications

The tank battalion command net uses HF and VHF radios. All tanks of the battalion are able to operate on this net. Commanders of supporting arms including reconnaissance and motorized rifle troops may be on this net. Company nets are not established.

Traffic discipline on the large net is strict and only authorized personnel may transmit. Junior commanders normally only acknowledge orders. Motorized rifle troops have a disadvantage when operating with tanks. Once motorized rifle troops dismount, the only radio communications they have with tanks is through their company commanders. Tank telephones are available; flares, hand signals, and tracers are used for target indication.

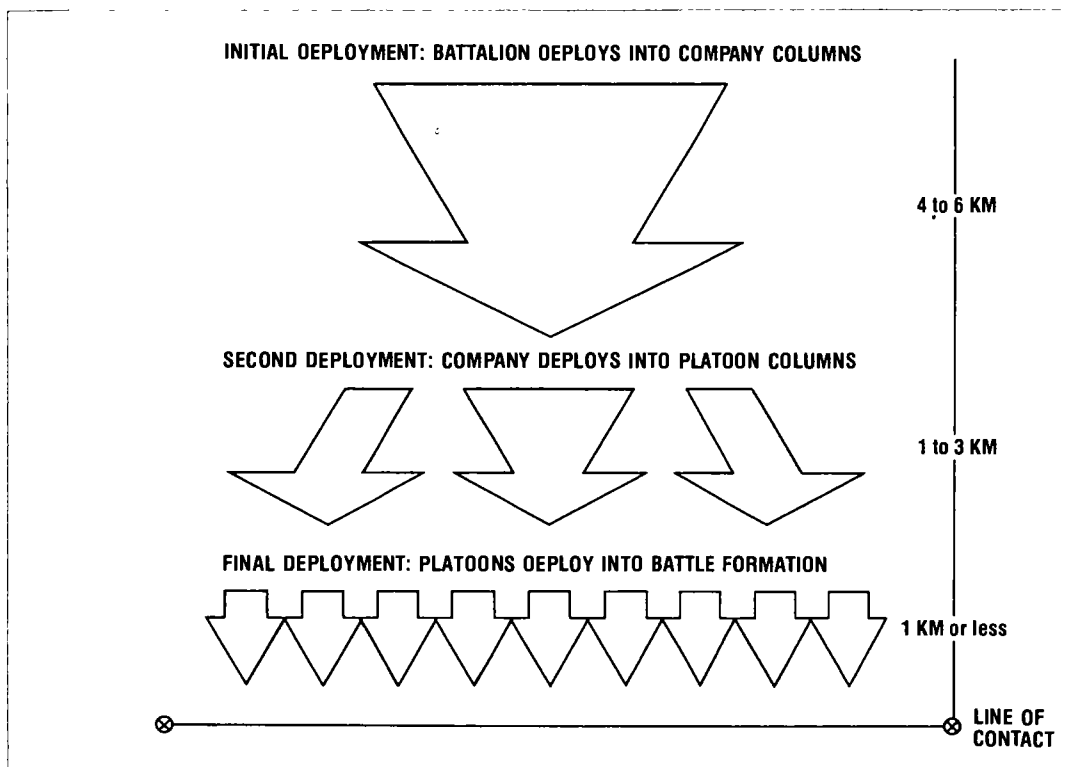
Deployment Drills

Standard and well-rehearsed deployment drills are used for movement from the line of march or assembly area into the assault. Average deployment is shown below.

Line of Deployment	Distance from line of contact (kilometers)
Into battalion columns	8 to 12
Into company columns	4 to 6
Into platoon columns	1 to 3
Into battle formation columns	1 or less*

*Note: The battalion may, in some situations, deploy directly from company columns into battle formation.

TANK BATTALION DEPLOYMENT



Road Movement

Tanks will move at 25 to 30 meter intervals at speeds up to 30 kmph. Road movement is normally carried out in long continuous columns. Unopposed tank units can move up to about 200 kilometers per day, but railroad flatcars and tank transporters are normally used on long nontactical moves.

Tanks under air attack will increase speed, vehicle spacing, may generate smoke, and will concentrate all available weapons fire at the attacking aircraft.

When a tank is disabled, the crew evacuates under cover of smoke and sets up the tank machinegun in the ground role.

Section 2—The Offense

Role of the Tanks

Opposing forces doctrine calls for a rate of advance averaging 60 to 100 kilometers per day in nuclear campaigns and some 30 to 50 kilometers per day in conventional operations. *In conventional warfare tanks are regarded as the main striking force and are usually present in large numbers to provide great momentum and firepower in the attack.* A numerical advantage of three to one is regarded as necessary for a successful operation and concentration of five or six to one will be made for primary thrusts.

In nuclear operations tanks will continue to play a leading role. Immediately after the nuclear strike tanks will advance in column to destroy surviving centers or pockets of resistance and to break into US rear areas. Speed is considered essential and the intention would be to cross the nuclear contamination area quickly before reserves can be deployed to block the advance.

In the past opposing forces commanders have tended to mass armor with little or no infantry support and no artillery, using the tank firepower and momentum to overwhelm the opposition. Such formations of armor are impressive and formidable when crossing homeland steppes, but they are not suitable for operations in the closer country of Western Europe. Here, broken ground, woods, and urban area cover much of the potential battlefield. In addition, technical advances, especially in antitank missiles and the combat experience from the Middle East war, appear to have convinced opposing forces of the necessity for grouping the combined arms team with tanks.

Therefore, there is an increasing tendency to use more motorized rifle troops with tank units, usually on a scale of one motorized rifle battalion to a tank regiment and one motorized rifle company to a tank battalion. There is currently no field artillery organic to a tank regiment. Opposing forces do use tanks in an indirect fire role, but the T-62 is not as well qualified for this role as some older models of opposing forces tanks. New armored engineer vehicles, including minelaying, mine clearance, and bridgelaying, have been introduced into the inventory.

Conduct of the Attack

Successful breakthrough operations are greatly dependent upon thorough reconnaissance and detailed fire planning, applicable to both nuclear and nonnuclear warfare. This enhances the tanks' penetration efforts. Then upon successful penetration through the first portion of the US defense, the tanks revert to an exploitation role to assist in overrunning US positions in depth. These objectives are for both a tank battalion in the attack or the tank company in direct support of motorized rifle units. The conduct of the attack is executed in the following manner:

- The tank units move forward, joining with those elements attached on the route to contact. The movement is timed to arrive and depart the departure position at the time specified in the battalion order. If the attack is to be preceded by a nuclear strike against forward US positions, arrangements are made to protect all elements of the attacking force from the adverse effects of the nuclear strike. Areas for protection are preselected along the route of contact and are occupied only as long as is necessary to shield the tanks and attached units.
- The tanks then deploy in phases so as to move into the attack fully deployed in combat formation. The tank companies deploy into columns of platoons approximately 1 to 3 kilometers behind the line of contact. Platoon tanks deploy into a line formation 1 kilometer to 500 meters before reaching the line of contact.
- Normally, the tank companies attack with three platoons in the first echelon; no second echelon or reserve is held at company level.
- The tanks move into the attack at a high rate of speed. All tanks commence firing on US weapons and personnel on the forward edge and in the immediate depths of the defenses. Antitank obstacles forward of the defenses are negotiated through previously prepared passages. Minefields may have been previously cleared by engineer units, or mine-clearing tanks may precede the advancing units.
- Under cover of supporting fire and air support, the tanks on the move intensify their fires and, together with motorized rifle units, attempt to penetrate the defense, destroy personnel and weapons, and continue an uninterrupted advance into the depths of the defenses. During this phase, the tank companies render assistance by fire to halted adjacent units when possible, but do not deviate from their own direction of advance. Momentum is maintained even if supporting elements are slowed.
- During the attack the tanks fire on the move, from short halts, or at a complete halt. The preferred method is fire on the move, which provides immediate firepower without slowing down the tempo of the advance. Since movement affects aiming and accuracy, tank crews utilize a combination of firing on the move and firing from brief halts. The halt is used to fire only one aimed round or several bursts from the machinegun and then the tank moves on. If necessary, a longer halt is ordered to fire three to five rounds. When tanks encounter a heavily fortified target or an object considered to be of vital importance to the mission, concentrated fire is used. The tanks halt behind any natural cover and continue to fire until the target is destroyed.
- Attached motorized rifle elements normally follow the tanks up to 150 meters to the rear. These troops remain mounted in their AFV's to keep pace with tanks. Riflemen deliver individual fire over the sides or through the ports of the AFV's.
- Upon overcoming the forward positions of the US defense, tank units become the spearhead of the advance and are given priority of supporting fires to insure a rapid rate of advance. Actions of the tank company are determined by the strength of US resistance encountered. Stubborn, isolated US strong-points are bypassed in order to maintain momentum. If the advance is halted and a flanking maneuver is not possible, the commander calls for additional supporting fires, assigns attack missions for an attempted penetration, and launches the attack. Tanks move under cover of supporting fires, fire on the

move, penetrate US positions, and continue in their assigned direction of advance. Antitank obstacles are either bypassed or cleared by supporting engineers or motorized rifle units. Radiologically or chemically contaminated areas must not lower the tempo of the advance. Such areas are passed through rapidly or bypassed.

- Upon overrunning the US defensive position, the commander orders all elements to continue the movement forward. If resistance collapses completely, the tanks form into approach march formation and are ordered to continue the advance in pursuit of the withdrawing US forces.

An opposing forces concept, should an opponent attack first and fail or counterattack and fail, is that the opponent must quickly change over to a hasty defense and attempt to strengthen his positions along tactically important terrain such as road junctions, commanding heights, and defiles. A hastily prepared defensive position is characterized by instability of the defensive system, lack of engineer fortifications, inadequate fire planning, and significant gaps within the defensive lines. Opposing forces consider that the basis for success in overrunning this type of defense is a penetration from the march without a lengthy organization for the attack. This rapid movement to effect a penetration is supported by all available fire means to include nuclear strikes, conventional artillery fires, and air strikes. The rapid momentum and shock created by aggressive movement of tanks is intended to disrupt US plans for withdrawal to new defensive lines and to force the US into a piecemeal commitment of units. The suddenness of the attack is designed to enhance seizure of the initiative, while continuous pressure throughout the operation is intended to force the US to fight under unfavorable conditions. As the opposing forces tanks approach the US position in either the approach march formation or in combat formation, the commanders receive the attack order by radio from the battalion commander. The order will specify the line of deployment, the objective within the first defensive positions, and the direction of further advance. When supported by motorized rifle units, the tank unit commander defines the missions and departure positions of the motorized rifle elements.

Pursuit is the continuation of the advance against a disorganized withdrawing US force. The tank battalion with its speed and great firepower is ideally suited to the conduct of pursuit action. Each commander is required to initiate pursuit actions immediately on noting indications of US withdrawal and to inform the regimental commander of his action so that any limited withdrawal may be developed into a more general withdrawal by concentrated effort of all forces in contact. The pursuit is continued day and night and may be terminated only on orders of the higher commander or by encounter with strong US resistance. Pursuit operations require considerable logistic support both in ammunition and fuel. In order to conduct effective pursuit, higher headquarters must keep these types of supplies well forward and readily available to the pursuit forces. The tank battalion normally participates in pursuit action as a part of a larger force. The pursuit action may be direct (frontal), parrallel, or a combination of both.

Meeting Engagement

During a meeting engagement tanks will maneuver on a broad front trying to reach the flanks or rear of US positions rather than attempt a frontal attack.

Opposing forces tanks will move straight into battle off the line of march in order to seize and maintain the initiative. Little time would be spent in reconnaissance by commanders though the reports of reconnaissance patrols are sometimes available.

The most common assault formation is a skirmishing line with some 30 to 100 meters between tanks. The platoon commander's tank is usually in the center while the company commander's tank is in the rear center of the company. The timing of deployment into assault formations is regarded as critical; deployment too early leads to a loss of momentum and deployment too late risks unnecessary casualties. In open country tanks will deploy into line outside the effective range of antitank guided missiles. If covered approaches are available, they will use them to advance in company columns to as close as 500 to 1,000 meters from their objectives.

In a typical meeting engagement by an opposing forces tank battalion the vanguard company might engage US forces with fire from the halt, while the main body moves in column around the flank to deliver an attack from the line of march. Artillery support would consist of brief successive concentrations on identified targets.

Deliberate Attack

This normal method here is the frontal assault, though enveloping maneuvers are developed in the depth of the US position. Strongpoints will often be outflanked or bypassed and tank columns may attempt to infiltrate through gaps.

Deployment drills are the same as for the meeting engagement except that tanks will normally occupy an assembly area some 8 to 18 kilometers from the line of contact before advancing to the attack. The second echelon of leading battalions will move in company columns some 3,000 meters behind forward troops.

Tanks are usually accompanied into a deliberate attack by infantry and engineers. Reconnaissance will be more thorough and may include personal reconnaissance by company commanders.

Tanks will attack, buttoned up, at maximum speed, which might be anything from 10 to 25 kmph, depending on the ground. When firing on the move the T-62 will tend to use "field speed," 2d gear (7 to 15 kmph). While in the assault, "combat speed," 3d gear (15 to 22 kmph), is normal. Fire and movement are not common below company level; the platoons and even individual tanks could be pushed forward on the flanks to envelop the objective. They would normally be supported by fire from the front.

Tanks will open fire at a range of about 1,500 to 2,000 meters though a good first-round hit is less likely over 1,500 meters. At ranges over 1,000 meters tanks will normally make a short halt of some 8 to 10 seconds to fire their main gun. Only one round is fired at each halt and the driver moves off automatically when the main gun is fired. At lesser ranges they are likely to fire on the move at about 10 to 15 kmph. Under about 800 meters, tank machineguns will be used against soft targets. If a company has been detailed to provide fire support, this will

normally be from a range of 800 to 1,500 meters. Counterattacks are engaged from the halt. Antitank guided missiles are countered by firing at the operator and blinding him with smoke, by movement across broken or sparsely wooded terrain, or by maneuver to a flank. Concentrated fire by two or more tanks, sometimes the whole platoon, is used to destroy the most important targets and to speed up the destruction of targets located at a range of over 1,500 to 2,000 meters. Priorities of engagement for tank gunners are:

- Antitank guided missiles.
- Tanks.
- Antitank guns.
- Infantry antitank rocket launchers (when within 400 meters).

Section 3—The Defense

Defensive Operations

Opposing forces doctrine considers the defense as the occupation and holding of previously well-prepared or hastily occupied areas or positions from which units inflict losses on the attacker, repel his troops, and create favorable conditions for launching a counteroffensive. Defense is considered a transitory stage of combat which is used to repel a superior opponent, to consolidate objectives, to secure the flanks of attacking units, to gain time for the regrouping of forces, to repel counterattacks, and to canalize an opponent into a disadvantageous position where maneuvering forces can destroy him. Opposing forces units may be included in the overall maneuver defense plan and utilize rapid movement to absorb the initial attack, give ground, and create favorable conditions for the commitment of the tank heavy reserves. Tanks in defense are placed in prepared positions which are dispersed laterally and in depth to avoid massing units larger than battalion, the basic forward defensive unit. These battalion defense areas consist of a series of well-dispersed company positions, protected by mines, obstacles, nuclear fires, and conventional artillery.

Defensive Missions

Tank units may be assigned various defensive missions which include:

- Holding a designated area.
- Destroying a US penetration by direct fire or counterattack.
- Engaging the US force from ambush.
- Protecting the defending units as part of the antitank strongpoint.
- Closing gaps created by US nuclear strikes.
- Providing indirect fire support.
- Forming a part of the reserve.

Frontages and Depths

The frontages and depths for a tank battalion are determined by terrain, cover, comparative strengths, mission, and available fire support. Normally, a tank battalion can cover an area 3,000 to 5,000 meters wide and 2,000 to 4,000 meters deep. Within the defense area, the tank battalion organizes mutually supporting

company defense areas, each of which is up to 1,000 meters wide and 1,000 meters deep. When the battalion defense area is 3,000 meters wide, the gaps between company positions may be as much as 800 meters wide.

Tactics

Organization for the defense is normally composed of two echelons with two tank companies in the first echelon and one tank company in the second echelon. There are occasions when terrain will dictate the disposition of the battalion; therefore, there may be only one company in the first echelon and the other two in the second echelon. A platoon of the second-echelon company may initially defend ahead of the main defense position and later fall back. A motorized rifle company normally is attached to the tank battalion with each of its platoons attached to each tank company. If the US force penetrates to a minor degree, the battalion commander may order a first-echelon tank company to launch a counterattack. However, the counterattack usually is conducted by the second echelon supported by fire from the tank company in the first echelon. Medium tank units can be used as a first-echelon force; however, these units are normally the commander's counterattack force.

A battalion could be a part of the regimental tank reserve and then normally occupy an assembly area in the vicinity of the regiment's second echelon. It will mount regimental counterattacks, or they may be used to close gaps in the first echelon.

The division commander always keeps a tank reserve which may consist of an entire tank regiment, but, as a minimum, will be at least one tank battalion. The primary function of this tank reserve is to form the basis of the divisional counterattack force. This unit may occupy an assembly area up to 20 kilometers from the line of contact and will have a number of preplanned deployment lines from which to mount counterattacks in conjunction with the division second-echelon reserves or reserves of first-echelon regiments.

Reserve tanks may be moved forward at night to occupy ambush positions. Motorized rifle platoons are normally attached to tank companies at night to provide for close-in defense.

Chapter 7

THE MOTORIZED RIFLE REGIMENT

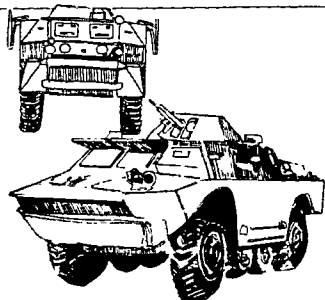


TABLE OF CONTENTS

Section 1

Organization	7-1
General	7-1
Personnel, Weapons, and Equipment	7-2
Mission	7-2
Fire Support Units ..	7-2
Combat Support Units	7-3
Service Units	7-3
Regimental Command Post	7-4
Radio Nets	7-4
Tactical Movement ..	7-5
Logistics	7-6

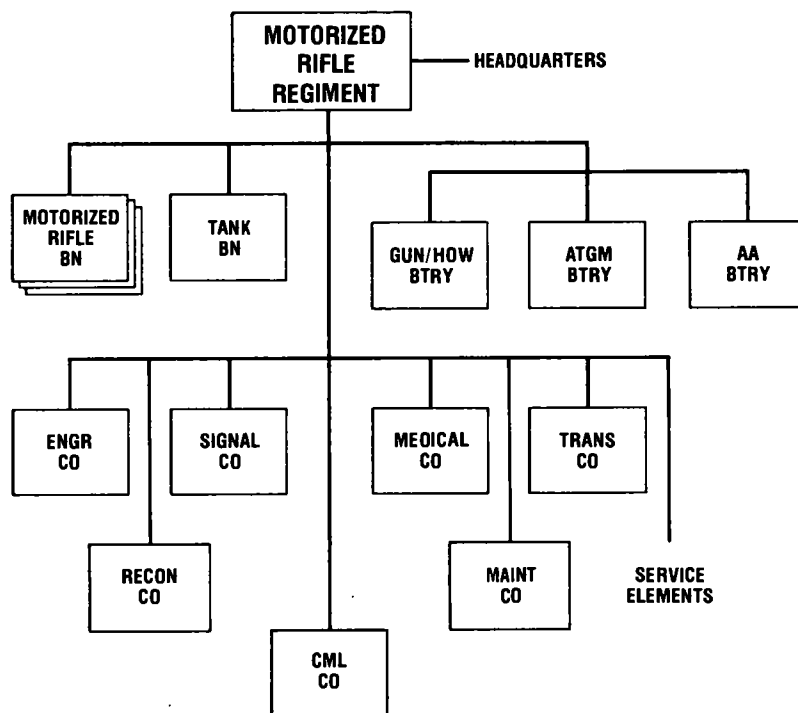
Section 2

The Offense	7-6
Offensive Operations	7-6
Attack Formation	7-7
Frontages and Depths	7-7
Conduct of the Attack	7-7
Regimental Artillery Group (RAG)	7-8
The Meeting Engagement	7-9
The Breakthrough ..	7-9

Section 3

The Defense	7-10
Deployment	7-10
Conduct of the Defense	7-11

Section 1—Organization



General

The motorized rifle regiment contains organic rifle, tank, artillery, engineer, reconnaissance, signal, and other necessary service elements. *The regiment is a balanced, combined arms force designed to conduct combat either as part of a larger force or as an independent unit.* The regiment is the smallest opposing forces unit to have a complete headquarters for operations and planning. It is 100 percent mobile and equipped with a sufficient amount of transport to carry all combat support and service personnel and equipment of the unit.

Personnel, Weapons, and Equipment

	PERSONNEL			WEAPONS & EQUIPMENT																		
UNITS	OFFICER	ENLISTED	TOTAL	TK MDM 55.62.72	TANK PT-76 AMPHIBIOUS	APC. BTR-60 PA/PJ/PB	APC BMP	APC. BRDM-2	MTRCL	7.62mm LMG PKM	23mm AA GUN ZSU-23-4	ATGM VEHICLE AT-2/3	ATGM MANPACK AT-3	73mm RCL GUN SPG-9	85mm ATGL RPG-7	120mm MORTAR	122mm GUN/HOW*	SA-7 GRAIL	TEL SA-9	RADAR (Gnd Surv) GS-12		
REGT HQ	28	32	60			1	1	4	4					6	6	81	18					
MTR RIFLE BN (3)	84	1236	1320			3	90	3		171			6	6	81	18		27				
TANK BN	23	185	208	40		1		1										9				
GUN/HOW BTRY	5	64	69														6					
ATGM BTRY	4	16	20									9										
AA BTRY	6	52	58								4								4			
RECON CO	4	43	47		3			9	5											1		
ENGR CO	5	53	58																			
SIGNAL CO	4	53	57			2																
CHEMICAL CO	1	34	35					2														
MEDICAL CO	4	23	27																			
TRANS CO	5	69	74																			
MAINT CO	3	47	50																			
SERVICE ELEMENTS	1	31	32																			
TOTAL	177	1938	2115	40	3	7	91	19	9	171	4	9	6	6	81	18	6	36	4	1		

*TOWED OR SELF PROPELLED.

Mission

The motorized rifle regiment is capable of performing many offensive, defensive, and special missions with or without reinforcements under both conventional and nuclear warfare conditions. Some of the more important are:

- Penetration of main enemy defenses and seizure of critical terrain as the first echelon of the division.
- Exploitation of successful offensive action and pursuit of disrupted enemy forces including the neutralization of enemy counterattacks.
- Conduct of an organized defense in the division zone including the mission of a counterattack force for the division.
- Conduct of special missions such as division flank security or the forcing of a water obstacle.
- Operate in the division second echelon both offensively and defensively or as part of the army reserve.

Fire Support Units

The fire support units of the regiment consist of an air defense battery, a howitzer battery, and an antitank guided missile battery. These fire support units are independent of each other and are commanded directly by the regimental commander. There is no intermediate battalion headquarters.

The howitzer battery has six 122mm D-30 or 122mm SP M1974 howitzers. Maximum range is 15,300 meters. The howitzer battery has five officers and 64 enlisted men for a total of 69 personnel.

The antitank guided missile (ATGM) battery has three platoons and is equipped with the AT-2 SWATTER or the AT-3 SAGGER. The battery has four officers and 16 enlisted men for a total of 20 personnel. Each platoon has three ATGM vehicles for a total of nine in the unit. The battery is equipped with the AT-2 or the newer AT-3 mounted on either the BRDM or the BRDM-2, and each vehicle has a two-man crew.

The anti-aircraft battery has a gun platoon equipped with the 23mm ZSU-23-4 and a missile platoon with the SA-9 GASKIN. The ZSU-23-4 quad gun uses a GUNDISH radar and optical sights. The range is 3,000 meters with the radar and 2,500 meters using optical sights. The crew is four men and the weapon has a cyclic rate of fire of up to 4,000 rounds per minute. The SA-9 low altitude system has a slant range estimated to 7 kilometers. The SA-9 uses an infrared homing guidance system.

Combat Support Units

The combat support units provide direct combat related services other than fire to assist the regiment. These units are the reconnaissance company, engineer company, and the signal platoon.

The reconnaissance company consists of a headquarters section, amphibious tank platoon, two motorized reconnaissance platoons, and a long range reconnaissance section. The company has four officers and 43 enlisted men. The amphibious tank platoon has three PT-76 tanks. Each motor reconnaissance platoon has either four BRDM or BRDM-2 vehicles and two motorcycles. This highly mobile unit provides the regiment with a limited reconnaissance capability. It can provide flank security but it usually precedes the regiment when on the move in a typical scouting role. The reconnaissance company collects combat intelligence in the form of information on the terrain, enemy strengths, weaponry, and combat capabilities and limitations.

The engineer company has five officers and 53 enlisted men. It has two armored tracked minelayers, one mineclearing plow, a truck-mounted medium bridge set TMM, and two track-launched bridges mounted on a T-55 chassis. The company is capable of constructing obstacles and defensive positions, repairing damaged roads, laying mines, performing demolition missions, clearing paths in minefields, and constructing portable bridging organic to the company.

The signal company is responsible for establishing radio and wire communications within the regimental headquarters and radio relay stations to the division. It also has a limited radio repair capability. The principal vehicles of the platoon are two BTR-60U command and control vehicles. The platoon also operates the GS-12 ground surveillance radar.

Service Units

The chemical defense company has one officer and 34 enlisted men. It provides chemical reconnaissance and decontamination of both personnel and equipment.

The medical company has four officers and 23 enlisted men. It supplies normal medical support and operates the aid stations.

The transportation company consists of five officers and 69 enlisted men. This company provides transportation support for the regiment.

The maintenance company of three officers and 47 enlisted men provides maintenance for the entire regiment.

Regimental Command Post

The location of the command post (CP) is more clearly defined in a defensive situation than in the offense where opposing forces doctrine demands a rapid advance of the regiment.

The CP is the center of regimental control and operations. Among the principal staff members are the regimental commander, chief of staff, deputy commander for political affairs, chief of artillery, engineer officer, operations officer, and deputy commander for the rear. Appropriate liaison officers are also present.

The CP is normally located well forward in the regimental sector where the commander can best observe the enemy and still maintain communications with division and subordinate elements. The CP is normally located within 1 to 2 kilometers of the line of contact in offensive situations and about 3 kilometers behind the line of contact in the defense. In both cases the CP is generally located near the second-echelon battalion of the regiment. Opposing forces use a mobile CP for fast-moving situations. Displacement of the CP is permitted only on the approval of the division commander.

The regimental commander may establish a command observation post from which he can maintain direct observation of the enemy, control all elements of the regiment, and most effectively influence the regimental main effort. This outpost can be as close as 100 meters to the main battle area. It may even be an observation post of a first-echelon battalion. The commander is usually accompanied by his chief of staff and the chief of artillery. Other key officers may be summoned to this location as the situation develops.

Other observation posts (OP) established for regimental control include the artillery OP and what opposing forces term auxiliary OP's selected by the commander as alternate OP's.

Radio Nets

The regimental commander has command, fire control, and coordinating radio nets for communication with his subordinate elements. Normally, two command nets are operational to the motorized rifle battalions, tank battalion, the regimental rear control point, and the reconnaissance company. A separate command net is established for command of combat support and fire support elements.

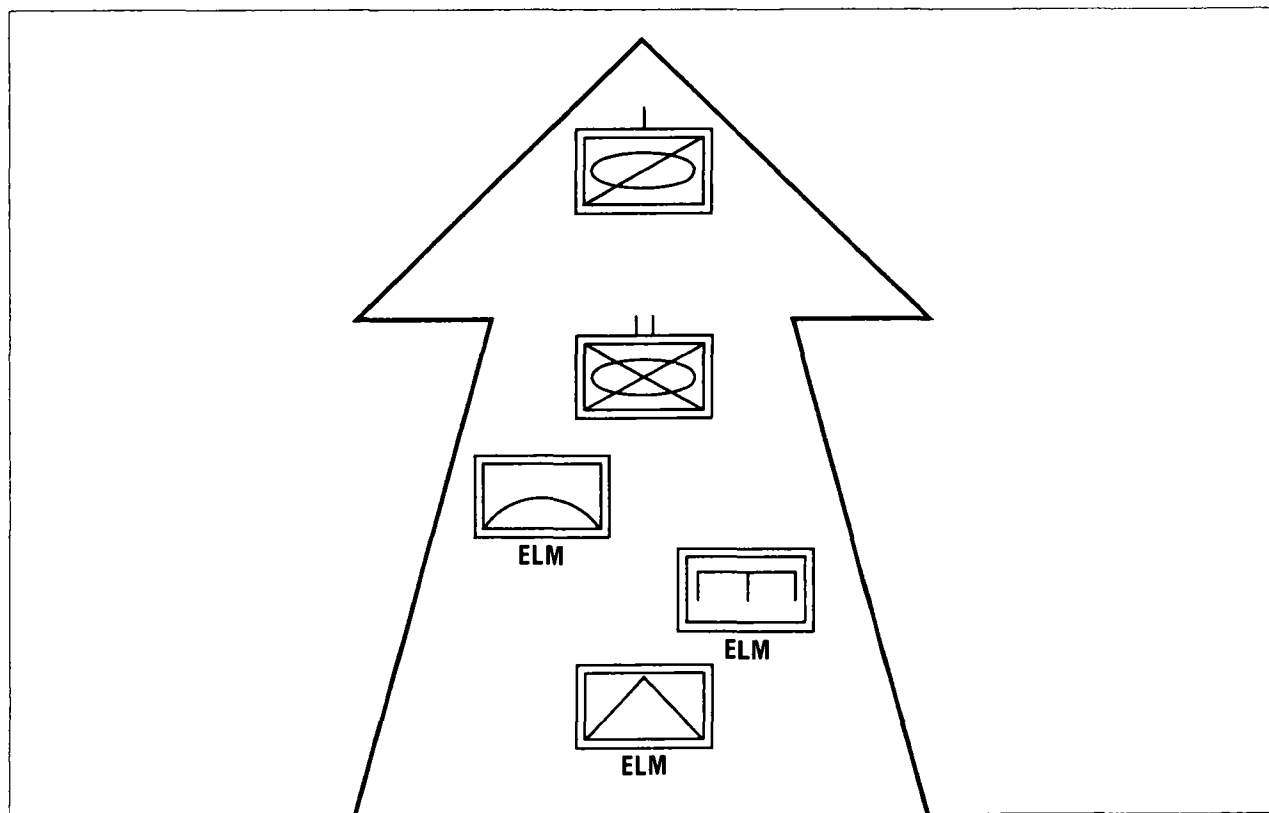
A net is usually established for the air defense battery. Logistical matters are conducted over command areas. The regiment also operates in the air-warning

and observation net which is established by higher headquarters and functions at all levels down to company. This net is used primarily for emergency warning of enemy air, nuclear, or chemical attack.

Radio communications with division headquarters is maintained for command, staff, and coordination activities. Up to three command nets are established for normal operations. It is also normal to operate up to four separate staff nets between division staff sections and their regimental counterparts.

Tactical Movement

Tactical doctrine emphasizes mobility and dispersion of larger units on the modern battlefield. The commander of the regiment is confronted with increased problems of security if his unit is to survive as an effective fighting force. Depending on the mission, he organizes advance, flank, and rear guards. March security is provided by reconnaissance, use of march security forces, and an air defense umbrella provided by the antiaircraft battery.



Each forward regiment of a division organizes an advance guard with a reinforced battalion. The advance guard is a motorized rifle battalion reinforced with the reconnaissance company, antiaircraft, engineer, and antitank elements. The advance guard is responsible for overcoming local opposition, particularly antitank weapons, and strives to keep the main body moving. If unable to overcome or bypass the opposition, the advance guard will cover the deployment of the main body. When the regiment marches as part of a division, it may be the advance guard for the division.

In a movement of the regiment a march order is normally issued. If time permits in the planning phase, appropriate march graphs and tables are included in the march order. Control measures include an initial point and designated control points. The regimental lead element is expected to arrive at the initial point on the route moving at the prescribed rate of speed with proper intervals. Controls are designated at intervals as time regulatory lines. Control points are most important when the regiment marches along more than one route to maintain proper alignment without exposing a flank.

Logistics

The opposing forces doctrine of fast-moving mobile warfare and new requirements of resupply caused by nuclear wars have caused them to modernize supply activities. *Standardization of equipment that is simple and rugged is a guiding principle in design of new equipment.* Supplies are normally delivered from higher to lower units. Thus, the regiment is responsible for supply to battalions though they do deliver ammunition and POL to companies. Ammunition, POL, materials for protection in CBR attacks, and rations are delivered in order of priority.

The principal means of transport of supplies to regiment and down to battalion is by truck. Helicopter delivery is used when possible but is not yet considered a primary means of regimental resupply. Ammunition is requisitioned in terms of "units of fire" which is a fixed quantity per weapon. Opposing forces also use "basic load" as does the US Army. POL supply is based on "refills." A refill is the amount of fuel required to fill the vehicle main and external fuel tanks. The refill also contains a small amount of lubricant. The regiment has one refill in organic vehicle main fuel tanks, and a one-half refill in auxiliary tanks. Another one-half refill is carried on regimental supply trucks, which gives the regiment a total of two refills on hand immediately prior to deployment for combat.

The regimental supply point is located in the regimental rear. It may be anywhere from 5 to 30 kilometers to the rear of front lines. In fast-moving situations, mobile supply chains may be formed and moved forward to keep up. Reserves held at regiment are part of a division's 3- to 5-day supply.

Rations are normally distributed to the battalion consolidated messes. The regiment keeps a 3-day supply on hand. Units in combat attempt to serve one hot meal a day. Dry rations are also carried by troops and regimental supply.

Section 2—The Offense

Offensive Operations

All units of the opposing forces employ the three major types of actions as described in chapter 2. The regiment, like the battalion, employs forces in echelons, both in offense and defense. In the offense, two echelons are normal. As the unit attacks in echelons, each with a preplanned scheme of maneuver and objective, the offense appears to US forces as a series of attacking waves. One echelon,

all battalions on line, may be used when US forces are weak, the area of operations wide, or nuclear weapons are allocated to the division which supports the attack.

The regiment normally has a company in reserve reinforced with antitank weapons. This is a contingency force used to replace destroyed units, to repel counterattacks, to provide local security, and to act as an exploitation force if needed.

Attack Formation

The attack formation of the reinforced regiment is determined after consideration of the mission, terrain, US defenses, and means available. The regiment normally attacks in two echelons. The first echelon consists of two motorized rifle battalions, each of which usually has a company of medium tanks attached. The second echelon is usually the third motorized battalion which may or may not be reinforced with tanks. The second echelon is used to reinforce the first echelon, to outflank US defenses, to mop up bypassed resistance, and to block counterattacks from the flanks. It usually follows the first echelon by 3 to 6 kilometers and is usually committed from the march. One rifle company may be used as an advance guard for the regiment and the remaining tank company is designated as the reserve.

Frontages and Depths

A regiment normally has a sector of up to 10 kilometers and an attack frontage of 4 to 6 kilometers. The actual breakthrough zone of the regiment may be 2 to 4 kilometers wide within its assigned attack frontage. The regiment attacks to a depth of 8 to 15 kilometers for an immediate objective and 20 to 30 kilometers for a subsequent objective. The rear boundary extends back from the line of contact 10 to 15 kilometers. These figures are for nuclear operations. Distances will decrease for conventional operations and may decrease to 4 kilometers, or smaller, in an attack when the regiment leads a breakthrough for the division.

Conduct of the Attack

The motorized rifle regiment in the attack, as part of the motorized rifle division's first echelon, is given the mission to breakthrough to the US forward artillery positions and then continue the attack against US division reserves. The regimental commander uses the fire and maneuver capabilities of battalions and supporting units to maintain the momentum of the attack.

Attack positions for the battalions are selected by the regimental commander behind the last available terrain feature that can be reached without exposure to hostile observation and small arms fire. These positions may be at varying distances from the line of contact. The advance is so timed that all first-echelon battalions cross the line of departure at approximately the same time.

Security is organized at the regimental echelon. Antitank units in reserve prepare to protect the flanks of the pursuing units against armored counterattacks. Flank and rear security is provided by motorized rifle elements. Rear security groups keep the lines of communication free of US stragglers.

When the attack is launched, US strongpoints that cannot be immediately reduced are bypassed. Small elements are detached from the battalions of the first echelon to block these strongpoints and contain them pending the commitment of the second echelon. The first-echelon battalions, supported by the regimental artillery, attempt to penetrate the US defenses and create gaps between the positions to allow for the employment of exploitation forces.

Should a weak point in the US defense develop, the second echelon is promptly committed to encircle the US force and destroy it. The second echelon is also used to reinforce the first echelon should the advance begin to slow down, to outflank US defenses, and to block counterattacks from the flanks. Actions of the battalions are coordinated by changes of direction where necessary and by readjustment in supporting artillery fires. During this phase, the regimental commander is particularly alert for US counterattacks from the flanks supported by armor. Regimental antitank reserves are used to counter such threats. Hasty antitank minefields are used to block approaches favorable to the US. When the US armor threat no longer exists, the antitank mines are recovered and moved forward by assigned engineers assisted by motorized rifle elements.

The tank battalion is the commander's tank reserve and is committed to exploit penetrations. If its companies have been placed under the operational control of the motorized rifle battalions and the regimental commander desires to commit his tanks in mass, he will direct the motorized rifle battalions to release them to the control of the parent battalion. These tanks attempt to drive through and overrun US positions immediately in front of the battalion positions enabling the motorized rifle units to continue the assault.

The motorized rifle regiment begins pursuit at the first opportunity. During the initial phase, the regiment attempts to prevent the US force from breaking contact and strives to keep up the pressure. Small units are employed to infiltrate the US area to set up roadblocks and, in general, to delay and harass the retreating enemy. Motorized rifle columns, reinforced with tanks and artillery, are employed in coordination with tank units in the tasks of cutting up and destroying US columns.

Tank units are employed to race ahead of the retreating US columns and block their withdrawal routes, to attack withdrawing columns from the flanks, to make rapid surprise thrusts into the US rear to create panic, destroy supplies, rupture communications, and attack command posts. Strong reserves of tanks with artillery and motorized rifle elements are held in readiness to engage US reserves.

Regimental Artillery Group (RAG)

To reinforce the regimental artillery, the division commander through his chief of rocket troops and artillery, normally establishes a division artillery group and provides for the support of first-echelon regiments by forming RAG's.

These artillery groups are formed with organic and nondivisional units and are tailored for specific missions. The composition of a group, normally two to four battalions, may be changed during an operation. The RAG will normally have

122mm and 152mm howitzers. *The artillery group is commanded by the senior artillery commander present and is responsive to the needs of the regimental commander.*

RAG's interdict defiles and attempt to prevent the arrival of reinforcements. As a pursuit develops, they advance by bounds so that one echelon is in position to fire while the other displaces. If authority to use nuclear weapons is granted by higher headquarters, nuclear warheads attached to division will remain under division control. Supporting air units interdict bottlenecks on the routes of retreat with nuclear and nonnuclear (to include chemical and biological) fires, keep US forces under surveillance, and attack and protect pursuing units from hostile air attack.

The Meeting Engagement

In the meeting engagement, regiments will use their reconnaissance company and helicopters, if available, from higher headquarters. Intense reconnaissance and maneuvering in search of gaps or weak points is a prime goal of this reconnaissance. When exploitation points or gaps are found, attacks will be immediately carried out from the line of march. They will take the form of frontal assaults or envelopment maneuvers to the flanks or rear.

The hasty attack is normally an extension of the meeting engagement. It is used when US prepared positions are encountered and opposing forces have quickly located an assailable flank or gap in US defenses. *Opposing forces will deploy from the march columns and attack without halting in the belief that the disadvantage of a hastily planned and executed attack is more than offset by the advantage of striking an enemy who has not adequately completed his defensive plans.* The hasty attack can be made with all three motorized rifle battalions forward or two up and one back. In a hasty attack the tank battalion would probably remain attached to the battalion by company since they normally travel that way.

The Breakthrough

The opposing forces regiment is ideally organized for this maneuver as is the division since it has combat power assets to make it work. The breakthrough has as its purpose the rupture of US forward defenses to permit the passage of exploitation forces. A meticulously planned deliberate offensive operation, the breakthrough is carried out against well-prepared defenses in which no gaps or flanks can be found. *Opposing forces consider artillery, tanks, and motorized rifle troops as the primary ingredients of combat power and they will attempt to mass these arms in the quantities they deem necessary to achieve penetration success.* The regiment has the staff and organization to accomplish this mission.

As seen in its totality from the vantage point of the regimental commander, the breakthrough appears as a telescoping sequence of increasingly larger penetrations as each tactical level of unit attacks. The sequence begins with the initial rupture by the first-echelon companies of the battalion. When the second-echelon company passes through the gap, the battalion itself then becomes a part of the regiment's breakthrough. As the process continues up through each succeeding level, the width and depth of the breakthrough expands in proportion.

The deliberate attack is preceded by a thorough reconnaissance and sufficient engineer work to clear lanes through US obstacles. Opposing forces also consider finding and neutralizing ATGM positions of utmost importance—one of the keys to launching a successful attack.

The deliberate attack is also preceded by an intensive artillery preparation. The leading assault elements will attempt to move within 100 meters of this fire before it is shifted to targets farther to the rear. Artillery fires are laid down with such weight, volume, and accuracy that the artillery itself is considered an offensive. Sometimes at night the opposing forces will attack without preparation to gain surprise.

Air defense weapons cover the approach of opposing forces and they move well forward with advancing forces of the regiment. These air defense units act as an air defense umbrella against US fighters and helicopters. Another typical air defense mission for the battery is to protect the regimental artillery battery or attached RAG units. If the US air threat is light, then the air defense battery guns can be used for ground support fires.

Antitank guns are usually attached to motorized battalions in a deliberate attack. They displace to successive firing positions for direct fire at US tanks and self-propelled artillery. Antitank guns are also used for direct fire on US strongpoints.

Section 3—The Defense

Deployment

The first-echelon motorized rifle regiment usually is assigned to defend a zone approximately 10 to 15 kilometers wide and from 8 to 10 kilometers deep. The defense is organized in two echelons with two reinforced motorized rifle battalions in the first echelon and a reinforced motorized rifle battalion in the second. A RAG consisting of two or more light artillery battalions and a multiple rocket launcher battalion is formed from division assets and placed in support of a first-echelon regiment; this artillery group takes the designation of the regiment which it is supporting.

The first-echelon motorized rifle battalions defend the forward 4 kilometers of the regimental zone. The third motorized rifle battalion establishes a battalion defense area in the rear of the regimental defense zone. This defensive area is approximately 5 kilometers wide and from 3 to 5 kilometers deep; it is located 5 to 7 kilometers from the forward trace of the main defense belt.

The regimental artillery group prepares primary, alternate, and night firing positions for each battery within the regimental second-echelon defense zone. The platoons of the regiment's air defense battery are deployed to protect the batteries of the regimental artillery group.

The motorized rifle regiment's reserve force, consisting of the regimental tank battalion (minus) and an antitank gun platoon, is located in the vicinity of the

second-echelon battalion. The regimental command post is located with the second-echelon battalion and is protected by the security element of the regimental headquarters element.

Conduct of the Defense

The combat outposts keep the US force under continuous surveillance and a constant volume of long-range fires. Action is taken to deceive the US force as to the location of the main defense belt and to cause it to mass its forces. The combat outpost line holds its position as long as possible without becoming closely engaged with the US force.

The motorized rifle regiment begins the defense when the US force makes contact with the security outposts. As US elements move within range, security outposts take them under fire with mortars, small arms, machineguns, tanks, and antitank weapons. Artillery units place fire on the advancing US force and cover the withdrawal of the security outposts as the latter are forced back.

US penetrations of the forward positions of battalion defense areas are blocked by the second echelon, and small mobile tank forces are employed by the regiment to execute local counterattacks and reduce penetrations of the first-echelon positions. Penetrations of the regimental sectors are counterattacked by the divisional counterattack force (usually the divisional reserve consisting of the tank regiment, antitank weapons, and other artillery). If these counterattacks fail to stop the US advance, threatened units may withdraw to alternate defense areas on order of the next higher commander.

Chapter 8

THE TANK REGIMENT

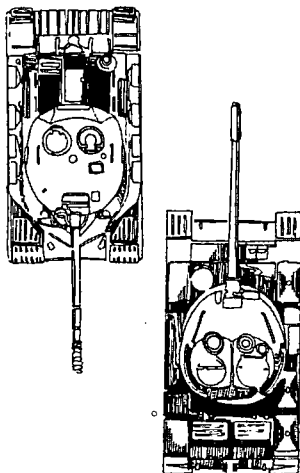


TABLE OF CONTENTS

Section 1

Organization	8-1
General	8-1
Personnel, Weapons, and Equipment	8-2
Tactics	8-2
Tasks and Objectives	8-3

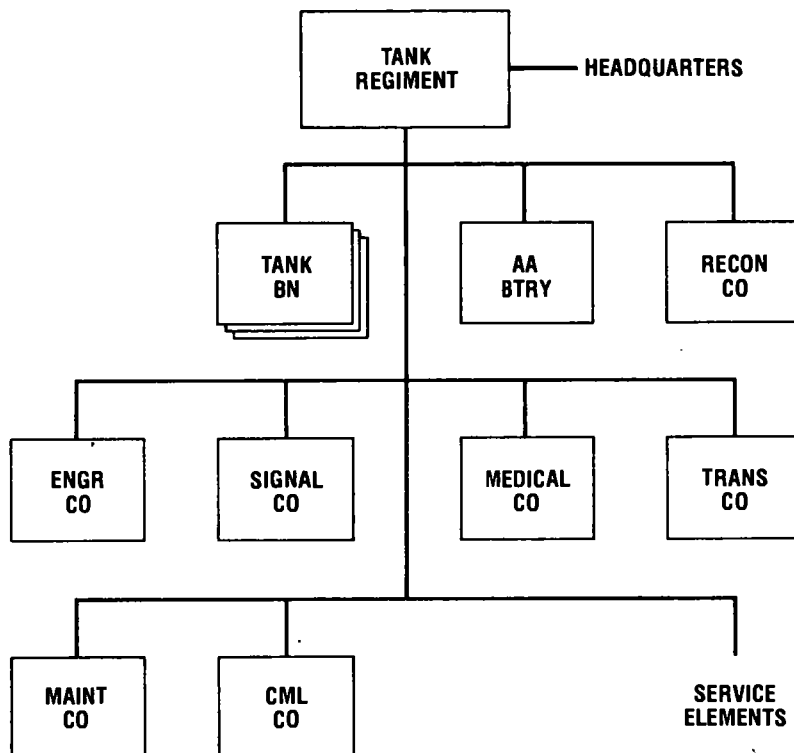
Section 2

The Offense	8-3
Medium Tank Regiment (Motorized Rifle Division)	8-3
Medium Tank Regiment (Tank Division)	8-4

Section 3

The Defense	8-4
Medium Tank Regiment (Motorized Rifle Division)	8-4
Medium Tank Regiment (Tank Division)	8-5

Section 1—Organization



General

The basic unit of opposing forces tank troops is the tank regiment with three battalions. There are three such regiments in a tank division and one in a motorized rifle division. A tank regiment includes 95 medium tanks and about 1,000 personnel. There is some organic combat support, but, significantly, this does not include infantry or field artillery.

Light amphibious tanks (PT-76's) are held by regimental and division reconnaissance units. They operate in conjunction with BRDM scout cars and motorcycles in a security role similar to that of US armored cavalry units.

The 95 medium tanks of the tank regiment are maneuvered by companies and battalions under the tight control of the regimental commander. In addition to the reconnaissance

company, the tank regiment has a mobile light air defense battery for defense against low-flying aircraft and helicopters. The tank regiments normally expect to fight with air support from the air army, but they do not have a forward air controller or a direct means of guiding air attacks on specific ground targets.

Personnel, Weapons, and Equipment

UNITS	PERSONNEL			WEAPONS & EQUIPMENT														
	OFFICER	ENLISTED	TOTAL	TK MDM 55 62 72	TK LT PT-76	7.62MM LMG PKM	23MM AA GUN 25U-23-4	AT GRENADE LCH RPG-7	SAM SA-7 GRAIL	SAM SA-9 GASGIN	APC BTR BMP BRPM	MTRCL	RADAR (GND SURV) GS-12					
REGT HQ	28	32	60	2														
TANK BN (3)	72	441	513	93					27		6							
AA BTRY	6	52	58				4			4								
RECON CO	4	43	47		3	3		4			4	3	1					
ENGR CO	5	53	58					4			3							
SIGNAL CO	4	53	57								2	4						
TRANS CO	5	69	74															
MAINT CO	3	52	55															
CML CO	1	34	35															
MEDICAL CO	4	23	27															
SERVICE ELM	1	31	32															
TOTAL	133	883	1016	95	3	3	4	8	27	4	15	7	1					

Tactics

The role of the tank regiment in the advance is to maintain the momentum of the advance, regardless of distractions and opposition, for as long as it is physically possible. The regiment is allotted a zone of advance for maneuver, and it may or may not be in actual contact with flanking units.

The opposing forces tank regiment is expected to be able to advance against or through any opposition except established antitank defenses in strength. When opposition is encountered on the axis of advance, the regiment will first attempt to force its way through, relying on surprise achieved by speed of action. If the US force is locally strong but isolated, it may be bypassed. Only if the US forces are coordinated and deployed across too wide a front to reveal easily exploitable flanks will the tank regiment accept the delay to its advance as unavoidable and mount a deliberate attack to break through and resume its forward movement. It will return to its axis as soon as possible.

The most significant difference between the tactics of motorized rifle units and those of tank troops is that, if necessary, tank units will advance without the support of infantry, whereas motorized rifle units will nearly always have some tanks in support; however, this is only done in specific operations such as in the pursuit where time is vital.

Tasks and Objectives

Every level of command has both an immediate and a subsequent objective. The subsequent objective of a tank regiment corresponds to the immediate objective of the division. Thus, a regimental commander will have an immediate objective for his leading battalions, through which his second echelon will pass to gain his subsequent objective. He will then have achieved the division's immediate objective. If possible, he will continue to advance along a designated "line of advance," but the major responsibility for obtaining the division's subsequent objective normally falls on a second-echelon regiment which will, in due course, pass through the first.

Section 2—The Offense

Medium Tank Regiment (Motorized Rifle Division)

The medium tank regiment is the main exploitation force of the motorized rifle division. Opposing forces doctrine emphasizes the vital role of tanks in nuclear warfare, particularly in overrunning hastily occupied defenses, in a mobile exploitation phase of the offensive, and in the pursuit. The rate of advance of other divisional units is determined by that achieved by the tanks. The speed of the tanks and the comparative invulnerability of tanks to radioactivity increase the suitability of the tank regiment for employment in the exploitation of nuclear strikes and in sustaining the momentum of the advance by rapid crossing of contaminated areas.

The medium tank regiment is used to hold tactically important positions until opposing forces motorized rifle units arrive, to operate as a forward detachment when reinforced, to conduct meeting engagements, to envelop flanks, to operate in the US force's rear, to conduct counterattacks, to pursue the US force, and to employ antitank and indirect fires.

Doctrine permits the medium tank regiment to be employed as a first-echelon unit only if US tanks are expected to be encountered early and where the mission, terrain, and opposing forces favor its employment. Good tank terrain, a weak opponent, and the high-level use of nuclear weapons favor the use of the tank regiment as part of the breakthrough force to exploit nuclear breakthroughs, for deep penetration, for enveloping movements, and for exploiting gaps in the opponent's formations. Its mission would be to break through US defenses and continue the advance to the division's objective.

For a deliberate attack against a prepared US defense, the motorized rifle division normally attacks in two echelons, with two motorized rifle regiments in the first and one in the second echelon. In such an attack the tank regiment reinforces the division reserve to exploit the initial penetration by the forward motorized rifle units and to develop the attack into the depths of the US defense.

During mobile phases of offensive operations when the attack from the march or the meeting engagement characterizes the combat action, deployment of forces does not follow a standard pattern. The motorized rifle division normally advances in two or more columns, depending on the width of the division zone and

the number of routes available. The attack formation is developed by rapid employment of forces from march columns as the situation requires. In such an advance, the medium tank regiment moves well forward in the division main body to facilitate rapid commitment to exploit nuclear strikes or to attack the flanks of an encountered enemy force.

The division commander organizes his forces to include follow-up echelons and reserves to maintain a high tempo of advance, to repel US counterattacks, and to provide a force to exploit the offensive success of the first echelon. The reserve is a force withheld initially from an engagement for later commitment at a decisive movement. The division commander organizes this reserve force to include all combat arms (combined arms reserve, tank reserve, antitank reserve, and engineer reserve). The tank reserve consists of the medium tank regiment, less any detachments reinforcing the motorized rifle units when the regiment is not employed in the first echelon. As the main striking force of the division, the regiment is committed to exploit the initial penetration of motorized rifle regiments by deep thrusts into the depths of the US defense.

Medium Tank Regiment (Tank Division)

The medium tank regiment is normally a first-echelon force of the tank division. By combining its organic heavy firepower with supporting tactical nuclear strikes, conventional artillery fire, and airstrikes, the medium tank regiment can rapidly maneuver to accomplish its offensive mission.

The medium tank regiment organizes for the attack to be employed as a first-echelon unit where the mission, terrain, and US forces favor its employment. ***Regardless of whether the medium tank regiment attacks in the first echelon of a large-scale operation or is committed after the forward US defenses have been breached, its attack is characterized by utmost violence and extremely vigorous action.***

The medium tank regiment, when found in the tank division, has a different mission (see chapter 10) than when found in the motorized rifle division. The methods of employment, therefore, will parallel those of the tank division and the tank army.

Section 3—The Defense

Medium Tank Regiment (Motorized Rifle Division)

Normally, the tank regiment is employed in a counterattack role during the defense and is usually located in or behind the area of the second-echelon forces. Such a mission is offensive in nature and will be discussed in chapter 9, The Motorized Rifle Division.

The tank regiment is prepared to conduct a defense if required to gain time to mass necessary forces to continue the offense, to consolidate captured positions, or to repel US ground attacks. In this case, the medium tank regiment may be employed in a first-echelon role. As a first-echelon force, the regiment would be

assigned the defense of the most vital sector, or of that sector where an armor-heavy US attack is expected.

Normally, the tank battalions of the motorized rifle regiment are employed to provide tank reinforcements to first-echelon motorized rifle battalions and to constitute a regimental tank reserve. The tank regiment is thus left at the disposal of the division commander to form the main counterattack force of the division's defense system. If the terrain does not permit the maneuver of large tank formations, elements of the tank regiment may be subordinated to first-echelon motorized rifle regiments as tank reinforcements.

Medium Tank Regiment (Tank Division)

In a defensive posture, the medium tank regiment as a unit in a tank division may become a first-echelon defensive force and await the development of the situation in order to reassume an offensive role. If the regiment is not in a first-echelon defensive force, it waits to counterattack, is disposed well into the second defensive belt, and dispersed in order to avoid becoming a lucrative nuclear target. Should the first-echelon defensive belt collapse, a series of counterattacks, to include aviation and nuclear strikes, will be initiated and coordinated with all combat units. A powerful nonnuclear artillery preparation, tactical air support, and missile support will probably precede the counterattacks if the US force temporarily delays the continuation of its attack.

The medium tank regiment, as a segment of the counterattack force, receives two missions to perform when the counterattack is executed: immediate and subsequent. The immediate mission may be the destruction of the US force in front of the second defense belt and the recapture of the third defensive line of the first defense belt. The subsequent mission may be the recapture of the second and first defensive lines. If the counterattack fails or does not at least lead to the recapture of the third defensive line of the first defense belt, then the regiment must disengage, fall back, and seal off the second defense belt until the tank division's reserve can execute a counterblow to overcome the US force's penetration.

For more detail as to the employment, organization for the defense, and conduct of the defense by the tank army, refer to chapter 12.

Chapter 9

THE MOTORIZED RIFLE DIVISION

TABLE OF CONTENTS

Section 1

Organization	9-1
General	9-1
Personnel, Weapons, and Equipment	9-2
Division Artillery	9-3
Combat Support Units	9-3
Divisional Services	9-7
The Political Section	9-8
Command Posts (CP)	9-9
Camouflage and Deception	9-9

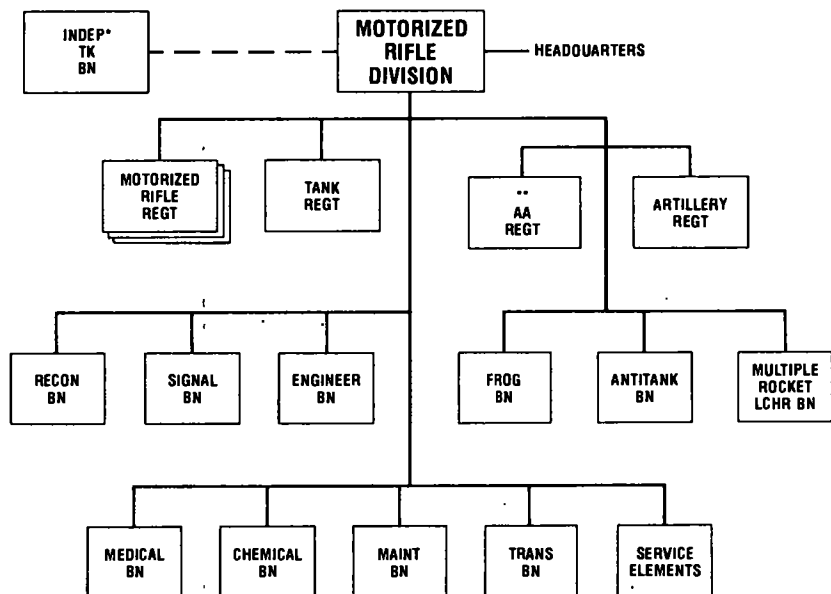
Section 2

The Offense	9-9
General	9-9
The Meeting Engagement	9-10
The Breakthrough ..	9-11
Pursuit	9-11
Large-Scale Offensives	9-11
Attack Formation	9-11
Frontages and Depths	9-12
Preparation for the Attack	9-12
Conduct of the Attack	9-12
Second Echelon and Reserves	9-13

Section 3

The Defense	9-13
General	9-13
Conduct of the Defense	9-13
Antitank Defense	9-15

Section 1—Organization



* MAY BE ORGANIC TO SOME BUT NOT ALL MOTORIZED RIFLE DIVISIONS.
** MAY BE REPLACED BY SA-8 OR SA-6 UNIT.

General

The motorized rifle division is a balanced tactical and administrative unit with a fixed organization. *The division is the highest tactical level where a fixed organization is found.* Armies and FRONT organizations are normally tailored for the specific mission or area of operations. The motorized rifle division is employed normally as part of a CAA, but may conduct independent operations for brief periods. The principal maneuver elements are three motorized rifle regiments

and a medium tank regiment. Some motorized rifle divisions, but not all, have assigned an independent tank battalion. This unit is discussed in chapter 6.

The motorized rifle regiments, which were discussed in chapter 7, are the largest maneuver elements of the division. The tank regiment is the main armor-striking force of the motorized rifle division. Opposing forces doctrine emphasizes the combined arms team, especially the vital role of tanks in nuclear warfare. Tanks spearhead attacks, overrun hastily occupied defenses, and exploit gains in the mobile phase of the offense and in pursuit operations. *The rate of advance of other divisional units is determined by that achieved by tanks.* The speed of tanks and the comparative invulnerability of armor to radioactivity increase the use of the tank regiment in exploiting nuclear strikes and in sustaining the momentum of the advance by rapid crossing of contaminated areas. The regiment is capable of holding tactically important positions until friendly rifle units arrive, of operating as a forward detachment when reinforced, of conducting a meeting engagement, of enveloping flanks, of operating in the enemy rear, of conducting counterattacks, of pursuing US forces, and of performing antitank and indirect fire roles.

Personnel, Weapons, and Equipment

Personnel, weapons, and equipment of the principal maneuver elements, the three motorized rifle regiments, and the tank regiment were discussed in chapters 7 and 8.

	PERSONNEL			WEAPONS & EQUIPMENT																		
UNITS	OFFICER	ENLISTED	TOTAL	TK MDM 55/62/72	TANK PT-76 AMPHIBIOUS	APC BTR BMP BRDM	MTRCL	7.62MM LMG PKM	23MM AA GUN ZSU-23-4	ATGM VEHICLE AT-2/3	ATGM MANPACK AT-3	57MM AA GUN* S-60	73MM RCL GUN SPG-9	85MM ATGL RPG-7	100MM AT GUN T-12	120MM MORTAR	122MM HOW**	152MM HOW**	122MM RL BM-21	TEL FROG-7	SA-7 GRAIL	TEL SA-9
DIV HQ	93	223	316																			
MTR RIFLE REGT (3)	531	5814	6345	120	9	351	27	513	12	27	18		18	243		54	18				108	12
TANK REGT	133	883	1016	95	3	15	7	3	4					8							27	4
ARTY & AA	195	1989	2184			15						24			18		36	18	18	4		
RECON BN	44	256	300		7	19	33							5								
ENGR BN	35	350	385			10																
SIGNAL BN	27	253	280			4	13															
CHEMICAL BN	12	138	150			4																
MEDICAL BN	32	168	200																			
MAINT BN	20	180	200																			
TRANS BN	25	350	375																			
SERVICE ELEMENTS	16	154	170			5	20															
TOTAL	1163	10758	11921	215	19	423	100	516	16	27	18	24	18	256	18	54	54	18	18	4	135	16

* MAY REPLACED BY A SA-8 OR SA-6 UNIT.

** TOWED OR SELF PROPELLED.

Organic division artillery consists of two battalions (18 howitzers each) of 122mm howitzers and one battalion (18 howitzers) of 152mm howitzers. Additionally, division artillery has a FROG 7 battalion, an air defense regiment, a multiple rocket launcher battalion and an antitank battalion. ***Opposing forces have maintained a high level of weapons development in the nuclear and missile artillery fields as well as in conventional fires.*** They stress standardization, ease of maintenance, increased firepower, and maximum mobility. Self-propelled artillery is beginning to replace towed weapons in some units. The motorized rifle division may receive reinforcing nuclear and conventional fire support from CAA and FRONT units. The FROG battalion is the main fire support weapon available to the division commander to influence the battle with an organic nuclear strike capability. The division forms a DAG and normally two RAG's. Opposing forces artillery is thus organized differently than US field artillery. Opposing forces form artillery groups at CAA, division, and regimental level by combining organic assets with any assets that are attached from higher headquarters, as opposed to US system of assigning tactical missions. In forming a RAG, the division commander assigns assets from CAA; he may further assign some of his division artillery battalions to a RAG. The RAG, in conjunction with the regimental howitzer battery, supports the regimental commander's attack or defense.

The rocket launcher battalion equipped with 122mm truck-mounted multiple rocket launchers is employed primarily to provide area saturation fire as part of the overall artillery fire support plan. The battalion's mobility enables it to fire large area concentrations on short notice and to displace before delivery of US counterfire. Commitment in mass at critical phases of an operation—such as in a penetration or breakthrough, in a main effort, or to repulse a US counterattack—is characteristic of the battalion's employment.

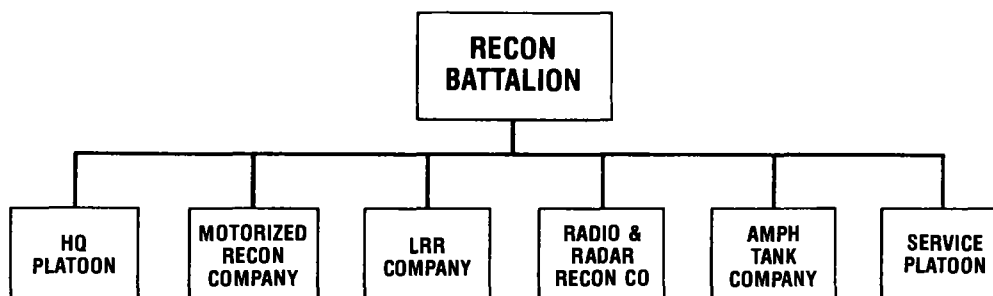
Opposing forces artillery have a target acquisition battery with a headquarters section, surveillance section, target ranging section, electronic reconnaissance section and a service element. These sections locate US artillery for counterfire and signal centers for fire missions. The target acquisition battery may operate with the DAG or be split and operate with the DAG and one of the RAG headquarters.

The 57mm S-60 air defense regiment with its four batteries provides the division with an air defense umbrella. The 100mm antitank battalion with its 18 tubes provides additional protection. This is a strong defensive unit and it is normally employed as a division antitank reserve. A battery may be attached to a first-echelon regiment. In addition, elements of the antitank battalion may be attached to division forward detachments.

Combat Support Units

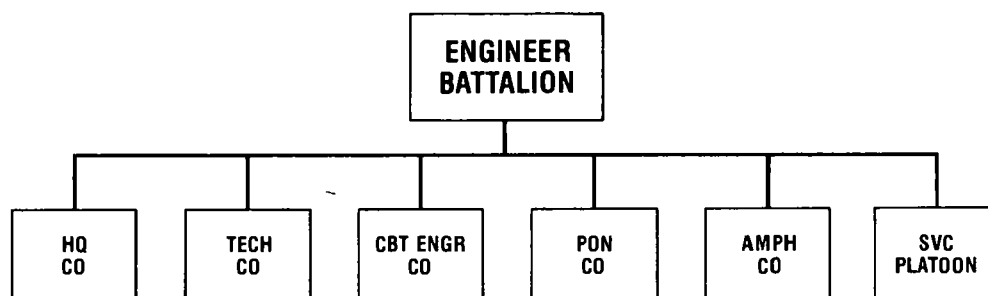
The combat support units of the motorized rifle division are the reconnaissance battalion, engineer battalion, signal battalion, and chemical battalion.

The Reconnaissance Battalion. It is a flexible, light, fast-moving element which is capable of being employed to a depth of 50 kilometers in a variety of combat support roles. Primarily, it is used to reconnoiter forward of the division and to aid the divisional units in fixing US forces for combat. In performing screening and reconnaissance missions, the battalion usually only engages in limited combat.



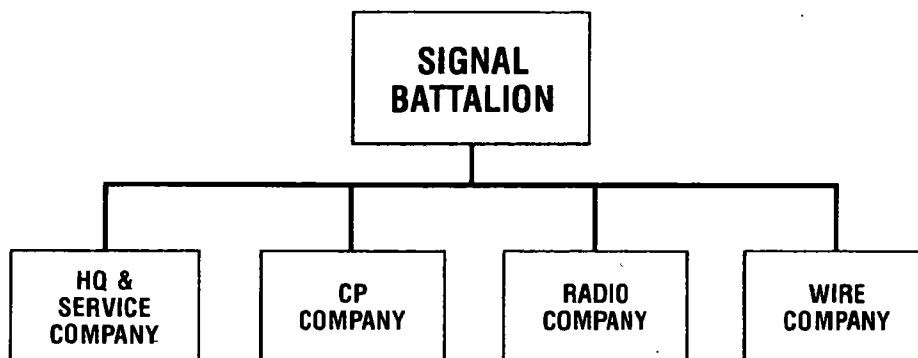
UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	TK AMPS PT-76	APC BTR BMP BROM	MTRCL	85MM ATGL RPG-7	7.62 RIFLE AKM	9MM PISTOL PM	SA-7 GRAIL									
HQ PLT	9	28	37		4	1		28	9										
MTR RECON CO	7	84	91		14	32		84	7	8									
LRR CO	9	21	30		1		5	21	9										
RAD & RDR RECON CO	7	71	78					71	7										
AMPH TANK PLT	3	18	21	7				18	3										
SERVICE PLT	9	34	43					34	9										
TOTAL	44	256	300	7	19	33	5	256	44	8									

The Engineer Battalion. Its primary mission is to support the rapid mobility of the division by providing general support, especially in the direction of the main effort in the offense, and to build obstacles on the most important avenues of US approach in the defense. The battalion has the necessary heavy equipment for road repair and construction of field fortifications. In the offense, the battalion is capable of construction, repair, and maintenance of roads and fixed or floating bridges; the laying or removal of minefields and obstacles; the opening and marking of lanes through minefields and contaminated areas; engineer staff planning; furnishing of sappers; and a limited ability to fight as infantry. In the defense, the engineer units are used mainly for laying minefields and for constructing fortifications and barrier systems. The unit is also responsible for camouflage and water supply.



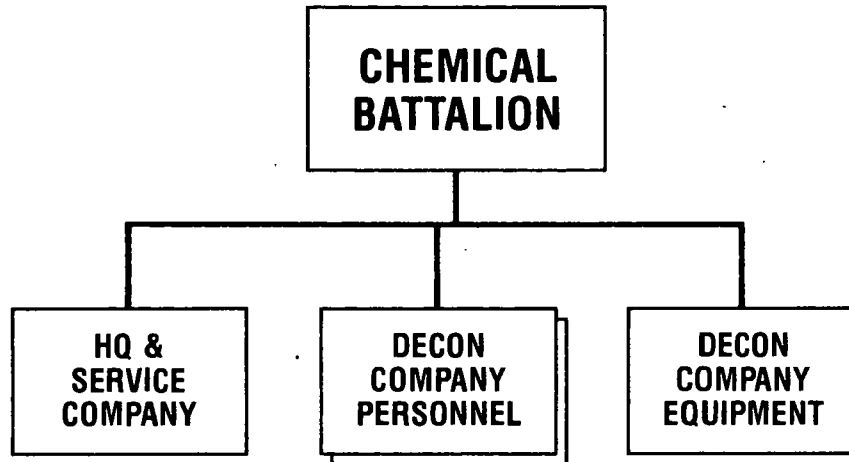
UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	APC BTR BMP BRDM	ARV T-54-T JSU-T	TRK	ARMED TRKO MINE LAYER	TRK MTD BRG SET TMM	TK LCHD BRG SET MTU	PONTON BRG SET PMP	TRKS AMPHN TRANS PTSM	AMPH FERRY SET GSP	MOTORIZED GRADER D-598	DOZER BAT BATM	DITCHING MACH MDK-2				
HQ CO	11	63	74	4		10													
TECH CO	7	89	96	1		14		1	3				3	3	4				
CBT ENGR CO	6	62	68	4		7	3												
PON CO	5	64	69			7				1									
AMPH CO (MRD)	4	47	51	1							12	3							
AMPH CO (TD)	7	49	56	1							12	6							
SVC PLT	2	25	27		3	15													
TOTAL MRD	35	350	385	10	3	53	3	1	3	1	12	3	3	3	4				
TOTAL TD	38	352	390	10	3	53	3	1	3	1	12	6	3	3	4				

The Signal Battalion. This battalion is responsible for filling division communications requirements and for controlling the operational employment of all subordinate signal assets.



UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	APC BTR BMP BRDM	MTRCL	TRK													
HQ AND SERVICE CO	9	45	54	1	13	13													
CP CO	6	48	54	1		16													
RADIO CO	6	80	86	1		10													
WIRE CO	6	80	86	1		13													
TOTAL	27	253	280	4	13	52													

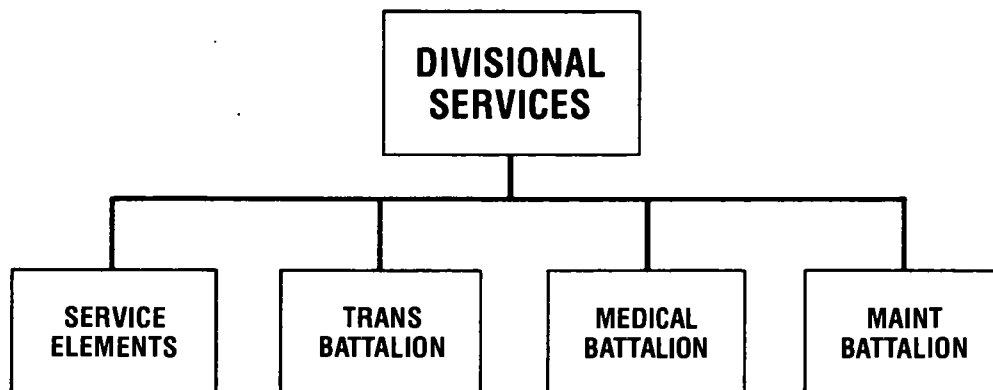
The Chemical Battalion. It is organized with two personnel decontamination companies and an equipment decontamination company. Each chemical company has a headquarters section and three platoons. It has excellent portable equipment for the decontamination of personnel, clothing, and equipment. Opposing forces CBR training and equipment, along with general troop knowledge, make their army the best in the world in CBR defense. They also have some devastating offensive CB agents and smoke-producing equipment.



UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	APC BTR BMP BRDM	BRDN RKH	ARS-14	DDA-53	TMS-65	TRK										
HQ AND SVCS CO	3	30	33	1	3				10										
DECON CO (PERS) (2)	6	72	78	2		12	6		14										
DECON CO EQUIP	3	36	39	1		4		3	6										
TOTAL	12	138	150	4	3	16	6	3	30										

Divisional Services

Divisional services include a service element, a motor transport battalion, medical battalion, and a maintenance battalion. The motor transport battalion provides trucks for the logistic support of the division. The medical battalion provides surgical, pharmaceutical, and preventive medical service, and organizes evacuation and collection of casualties for the division. The maintenance battalion consists of company workshops to provide vehicle, track, and artillery repair.



UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	APC BTR BMP BROM	ARV T-54-T JSU-T	TRK	MTRCL												
SERVICE ELM	16	154	170			10													
TRANS BATTALION	25	350	375			202													
MEDICAL BATTALION	32	168	200			31													
MAINT BATTALION	20	180	200	5	5	60	20												
TOTAL	93	852	945	5	5	303	20												

The Political Section

The political section is considered a distinct and primary element of the division headquarters. The section is headed by the division deputy commander for political affairs. The organization includes a small clerical force and political staff officers or instructors for the direction and supervision of :

- Party organization.
- Youth league activities.
- Propaganda and agitation.
- Political information (current events).
- Personnel (party roles).
- Welfare.

This section also observes and reports on any deviation from party reliability among personnel.

A special unit of the political section functions as the division counterintelligence unit. It technically works through command channels, but, in fact, is a secret police section. This unit's operations are secret and information on its activities may be withheld from division and higher commanders. Personnel of the unit also interrogate and investigate persons suspected of espionage, determine the political reliability of personnel, participate in the assignment of personnel to key positions, and work with the political section in propaganda and counterpropaganda activities.

Command Posts (CP)

CP's of the motorized rifle division consist of a main CP, a forward CP, a rear CP, and alternate CP's as required. Forward and main CP's are normally separated by 2 to 5 kilometers and deploy behind a first-echelon regiment. The rear CP locates to the rear of a second-echelon regiment. Each division and larger unit is required by doctrine to have a main CP and alternate CP at a nuclear safe distance from each other, both fully manned, and in continuous operation. In practice, due to a shortage of staff personnel, divisions man the alternate CP with a skeleton force.

Camouflage and Deception

The opposing forces emphasize achieving secrecy and surprise by means of camouflage and deception. During troop movements strict camouflage discipline is enforced while moving, during halts, and upon arrival in assembly areas. Maximum use of cover is stressed as essential due to the development of modern US imagery, to include radar, infrared, and thermal direction-finding equipment. Movement routes are chosen through ravines, gullies, and behind reverse slopes of hills if possible. Deception is achieved by swift regrouping or dispersion, by dummy positions, false columns moving in wrong directions, and by false radio traffic.

Section 2—The Offense

General

All units of the opposing forces employ the three major offensive actions as described in chapter 2.

The motorized rifle division normally is assigned either a zone of advance or a specific route. *A single route of advance is avoided wherever possible.* The time

gaps between columns of the division depend on US capabilities and march conditions. Most tactical marches are carried out under blackout conditions for maximum concealment.

When moving alone in one column, the division may be extended as much as 90 to 120 kilometers. When part of a large force on multiple routes, the division requires 30 to 70 kilometers. The division normally uses a reinforced motorized rifle battalion as its advance guard. The distance between the advance guard and the main body may be as much as 20 to 30 kilometers.

The division rear guard usually is composed of a motorized rifle battalion reinforced with artillery, tanks, and small engineer and chemical units. The distance between the rear guard and the main body may be as much as 25 kilometers.

Flank guards and outposts are dispatched as required. Normally, they are not more than 5 kilometers from the column. The composition of flank guards and outposts varies with the terrain and the situation.

Tanks and self-propelled guns move at the head of the main body. The bulk of the artillery marches with the main body and/or the advance guard to permit early deployment and rapid employment of artillery units. The bulk of the available antitank artillery follows the advance guard along the principal route of march. The antitank artillery reserve is echeloned toward the direction of the most likely enemy armor threat and moves by bounds.

The Meeting Engagement

The advance guard upon contact with an undeployed force attempts to overrun the forward US units while the tanks and self-propelled guns attack the US main body and artillery from the flanks and rear. Every effort is made to split the US column, destroy isolated elements, and attack from the US force's rear. Artillery and aircraft are used throughout the attack as they become available. Motorized rifle units are deployed as close to the US force and in as much depth as possible. Regrouping and centralization of fire support control are accomplished by successive commanders as soon as possible, but not at the expense of delaying combat operations. ***Uninterrupted pressure on the US force is maintained.*** Self-propelled guns and tanks cover the advance by following closely and engaging US strongpoints and antitank weapons. Before the attack of US armor, efforts will be made to separate any accompanying US infantry. If a strong US antitank screen is located, motorized rifle elements attack first, followed by tanks and self-propelled guns. Against superior US armor, division tanks may withdraw, protected by fires of self-propelled guns, and attempt to ambush the pursuing US tanks.

The advance guard upon contact with a deployed US force attacks and attempts to destroy the US force. If unsuccessful, it then tries to locate the US flanks while the main body deploys. The main body attacks with the least practicable delay. The attack of the main body is supported by all available aircraft and artillery, including nuclear fires. A hasty coordinated attack from the march can be made by division-sized units within 5 to 6 hours. A deliberate attack is made in accor-

dance with normal offensive procedures if the available intelligence indicates that the US is defending in force. If the attack of the advance guard is stopped and the US force counterattacks, the advance guard holds sufficient ground to cover the deployment of the main body. If this fails, the main body deploys on the nearest suitable terrain. Leading tank units may deliberately withdraw as a deception measure to lure the pursuing US forces into ambushes by self-propelled guns and other tanks.

The Breakthrough

The motorized rifle division in the first echelon of the CAA is given the mission to breakthrough US forces and continue the attack against corps reserves. To accomplish its mission, the motorized rifle division is normally organized so as to have two motorized rifle regiments, reinforced with tank battalions and antitank companies, in the first echelon; one reinforced motorized rifle regiment in the second echelon; one tank regiment minus battalions attached to the first-echelon motorized rifle regiments in reserve.

When the first echelon has broken through to the US force's forward artillery positions, the second echelon proceeds to widen the breach, destroy bypassed resistance, and exploit the division objective. The first echelon regroups and continues to advance or prepares to repel counterattacks.

Pursuit

Motorized rifle divisions form pursuit groups consisting of a motorized rifle company, a reconnaissance squad, an engineer squad, and an antitank platoon. When the motorized rifle division initiates pursuit, tanks of the medium tank regiment, supported by motorized rifle units, parallel the US withdrawal routes to block, cut off, and destroy segments of the retreating columns. Direct pressure on the US units in contact is increased within the main battle area so as to make the formation of US march columns difficult. Second-echelon regiments are moved forward in the main direction of pursuit and prepared for early commitment.

Large-Scale Offensives

The mission of a motorized rifle division in the first echelon of a CAA is to break through the defenses of the US forces. When this is done, the division continues the attack against the US corps reserves. *The objective of the motorized rifle unit is to destroy the cohesive defense of the US force, dividing it into small isolated groups, destroying each group in turn, and overrunning US division artillery.* One battalion of the medium tank regiment is normally attached to each of the first-echelon motorized rifle regiments with the condition that when the parent tank regiment is committed, the battalions are returned to its control. These attached tanks are in addition to, and augment, the organic tank battalions found in each motorized rifle regiment.

Attack Formation

The division normally attacks in two echelons. The first echelon usually consists of two motorized rifle regiments reinforced with tank battalions, antitank batteries, and supporting elements. The second echelon consists of one reinforced

motorized rifle regiment. The tank regiment, minus battalions assigned to the first echelon's motorized rifle regiments, is kept in reserve for commitment when the initial penetration is made.

When the motorized rifle division attacks in one echelon, one or two reinforced motorized rifle battalions are retained under division control as the division reserve.

Frontages and Depths

The width of the attack zone of a motorized rifle division in the first echelon of the FRONT's main effort, or one making the main effort for an army, is about 15 to 25 kilometers. The breakthrough frontage will be 4 to 8 kilometers depending on the situation (nuclear or nonnuclear). The depth of the division tactical formation may be 30 to 35 kilometers when fully deployed. When the division is attacking as part of a secondary effort, the width of the attack zone may be increased to about 20 kilometers with no significant change in depth of the formation, or to 30 kilometers with a corresponding decrease in depth.

Preparation for the Attack

The division moves by organic means into assembly areas about 20 to 30 kilometers from its attack positions. The stay in assembly areas is limited to the time necessary to assign missions to subordinate units, check preparations, and organize combat groups for the attack. On the night preceding the attack, the division moves to the attack position in battalion and regimental columns. March columns are preceded by antitank units. Whenever possible, attack positions and assembly areas are prepared with subsurface shelters before occupancy. Arrival at the attack positions is timed just to precede the start of preparatory fires. The division tank regiment moves after the preparation has started so that the noise of its movement is masked. All units stress camouflage and deception operations.

Conduct of the Attack

Covered by the artillery preparation, motorized rifle units and their accompanying tanks and assault guns move in on previously cleared lanes through obstacles to close with the US force. Assault units move to within 100 meters of the artillery impact areas and take advantage of any limited visibility and surprise achieved to close with the US force. During the assault, antitank guns and 120mm mortars are under the control of the supported units. Organic regimental artillery, reinforced by regimental artillery groups, supports the assault in depth and prepares to displace forward. Extended fire duels with enemy centers of resistance are avoided. Small detachments are left to contain the bypassed US forces.

The supporting artillery units concentrate their fire on US antitank defenses. Riflemen and engineers protect the tanks from US infantry, neutralize antitank minefields and other antitank obstacles, and help evacuate damaged tanks. Tanks normally do not outdistance their supporting motorized rifle units by more than 400 meters.

During the advance through the US position, special antitank groups composed of antitank guns, self-propelled guns, and engineers armed with flamethrowers

follow in the rear of the assault groups. The antitank groups block frontal counterattacks while tanks engage the US force from the flanks and the engineers assist in reducing US positions.

When the first echelon has driven through the initial US positions and has reached the US forward artillery positions, widening of the breach, destruction of bypassed centers of resistance, and exploitation of the breakthrough are undertaken by the second echelon, assisted by some of the assault group. The remainder of the first-echelon force consolidates captured positions and prepares to repel counterattacks or regroup and continues the advance.

Second Echelon and Reserves

The second echelon is used to provide direct support to the attack of the first echelon, protect flanks, repel counterattacks, maintain the impetus of the assault, mop up centers of resistance bypassed assault units, and exploit breakthroughs. It is also used to replace first-echelon units weakened or destroyed by US action. The second echelon normally follows the first echelon by about 6 to 8 kilometers and is usually committed from the march.

The tank regiment may be employed in the first echelon; but, as the division's main striking force, it normally is kept in reserve to exploit the initial preparation. The tank battalions may be used to reinforce the motorized rifle regiments of the first echelon. In this case the tank regiment regains control over them when it is committed.

Normal antitank, engineer, and antiairborne reserves are retained under division control for later engagement at the decisive time.

Section 3—The Defense

General

Division commanders select the exact trace of the forward edge of the main defense belt. Division defense plans include the organization of the defense, allocation and use of artillery, antitank defense, use of air support, counterattack by division forces, and priorities for the preparation of defensive works.

When not in contact with the enemy, the motorized rifle divisions manning the main defense belt establish general outposts in the security zone as much as 15 kilometers in front of the main defense belt. This is in addition to the army security force. Normally, the division's second echelon (a motorized rifle regiment) is employed in this task. As in the case of the contact and delay force, probable deployment of the general outpost force would be in the order of one battalion for each 8 to 12 kilometers of frontage.

Conduct of the Defense

The defense is based on the motorized rifle divisions of the combined arms army in the main defense belt destroying or canalizing the US force. The division defends in place.

The division, supported by army units, holds its position until overrun or ordered to withdraw. As a minimum, it attempts to canalize the US force and reduce the effectiveness of the penetration.

- Nuclear or chemical fires may be employed to blunt the US force's spearhead and to minimize its forward progress.
- Penetration in the division's first-echelon areas which cannot be reduced by local battalion or regimental counterattacks, or by fire alone, are attacked by the division's tank regiment which is the primary counterattack force available to the division.
- Penetration of the first-echelon regimental areas is blocked by the second-echelon regiment while the division counterattack force attempts to restore the area.
- Major US attacks which threaten to penetrate the main defense belt are counterattacked by the army counterattack force (usually the tank division from the second defense belt) supported by the division reserve if the latter has not been previously committed.

If the CAA fails to eject the enemy from the main defense belt through either failure of the counterattack or inability to execute it, elements that are engaged withdraw from the main defense belt and take up positions in the second defense belt.

The first-echelon motorized rifle division usually is assigned to defend a zone from 20 to 30 kilometers wide and approximately 15 kilometers deep.

- On occasion, the division may be assigned to defend on an extended frontage of up to 45 kilometers. The defense is organized in two echelons, with two motorized rifle regiments in the first echelon and one motorized rifle regiment in the second echelon.
- A DAG, consisting of several light and heavy artillery battalions from the CAA, is attached to the division. Some of these battalions may be used to fill regimental artillery groups; the remaining units are placed in the division artillery group.
- The first-echelon motorized rifle regiments defend the forward 8 to 10 kilometers of the division defense zone. The third motorized rifle regiment organizes three battalion defense areas across the rear of the division zone approximately 10 kilometers from the forward trace of the main defense belt. These are sited to protect key terrain and control avenues of approach from the front.
- The tank regiment is retained under division control as the division's tank reserve. Elements of this force (two or three companies) may be used to reinforce the motorized rifle regiments. It is located in the area between the first- and second-echelon regiments.
- The logistical elements of the first-echelon regiments are usually located within the division's second-echelon area.

Antitank Defense

Divisional antitank defenses are organized throughout the depth of the defense zone, mainly along avenues of approach vulnerable to tanks. Antitank defense plans include:

- Locating defensive positions on terrain unfavorable to the operation of armor.
- Attachment of additional antitank units to frontline defensive positions to cover the most dangerous avenues of approach. (In areas where there is a serious armored threat, 25 to 35 antitank guns for every 1,000 meters of front may be used.)
- Destroying US armor with artillery fires while in rear areas and attack positions.
- Placing extensive minefields on avenues of approach.
- Concentrating artillery fire on enemy tanks as they approach within effective range.
- Using artillery, antitank guided missiles, air defense artillery, tanks, and self-propelled guns in direct fire on tanks that have penetrated the defense position.
- Counterattacking the armored penetration with tanks and self-propelled artillery.

Division artillery direct fire weapons add depth to the antitank defense. These weapons are sited to protect each battalion's antitank guns from assault. Some of these weapons are held in mobile reserve in the rear of the division artillery positions to be moved to threatened sectors or to establish antitank positions in depth. Some antitank artillery units from higher headquarters, when allocated to a motorized rifle division, are kept in reserve and some are suballocated to first-echelon regiments. These antitank artillery units are deployed to form antitank strongpoints consisting of mutually supporting platoon areas sited in depth. Alternate positions are prepared to meet enemy penetrations. The guns of an antitank platoon are located in a diamond formation with about 200 meters between guns. Antitank artillery units retained under army control are usually positioned in the second and third defense belts. Division artillery units are assigned the following antitank tasks:

- Long-range fires.
- Fires on tanks in assembly areas and at lines of departure.
- Defensive fires.
- Final protective fires.
- Direct fires.

Long-range fires are placed on approaching US armored units to cause dispersion, delay, and destruction. All artillery and mortars are used for fires on assembly areas and attack positions. They also fire on targets covering probable routes from the attack positions to the forward trace of the defense areas. These fires separate the tanks from their accompanying infantry. Targets are fired on as soon as the leading US tanks enter the preselected area and fires are timed to move forward with the US advance. All field artillery pieces normally have several rounds of armor-piercing ammunition. For antitank purposes, an alternate position for each artillery piece is prepared near each firing battery. Air defense artillery may also be employed in antitank roles if required.

Chapter 10

THE TANK DIVISION

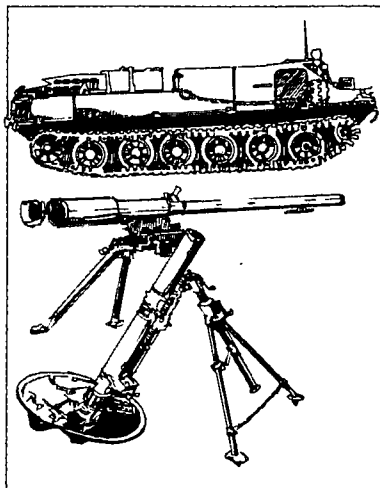


TABLE OF CONTENTS

Section 1

Organization	10-1
General	10-1
Personnel, Weapons, and Equipment	10-2
Mission	10-2
Division Artillery	10-3
Combat Support and Service Units	10-3
Division Movements	10-3

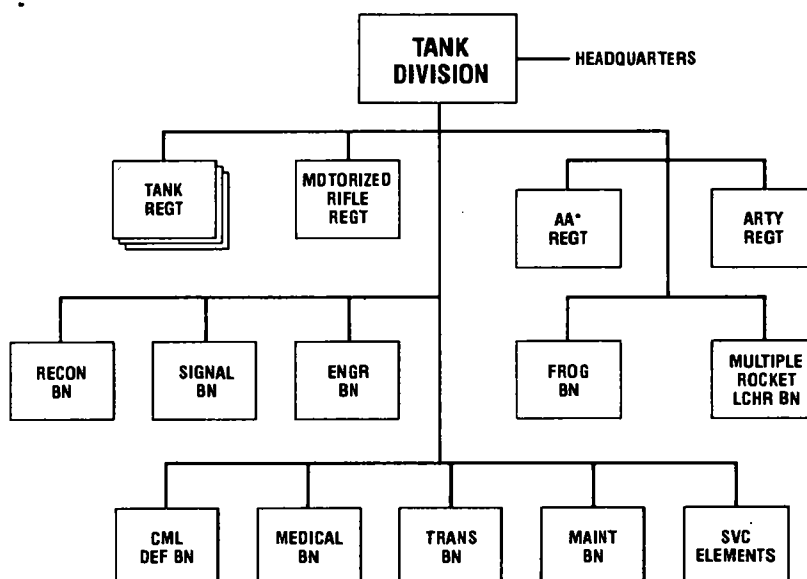
Section 2

The Offense	10-3
Employment	10-3
Frontages and Depths	10-5
Movement to Contact	10-5
Attack Formation	10-6
Conduct of the Attack	10-6

Section 3

The Defense	10-7
Employment	10-7
Organization	10-8
Conduct of the Defense	10-9
The Counterattack	10-9
Withdrawal	10-10

Section 1—Organization



*MAY BE REPLACED BY SA-8 OR SA-6 UNIT.

General

The tank division is a powerful combat organization, designed to achieve deep objectives in minimum time and to maintain the momentum of the attack or counterattack. The tank division is a major tactical and administrative unit with a fixed composition. *The tank army has emerged as the primary striking force of opposing forces.* Tank divisions are the main components of tank armies. They are also assigned to CAA. The traditional triangular organization applies to the tank division as it is built around three tank regiments, a motorized rifle regiment and division artillery. Opposing forces have achieved considerable standardization in their organizations. Combat support and service units of the tank division are

organized generally the same as those in the motorized rifle division. *Like the motorized rifle division, the tank division has its organic artillery. The major difference is that the tank division has no organic antitank units.* While opposing forces do emphasize the combined arms team concept, tank units are still looked upon as a primary strike force with an offensive capability for both nuclear and conventional warfare.

Personnel, Weapons, and Equipment

	PERSONNEL			WEAPONS & EQUIPMENT																		
UNITS	OFFICER	ENLISTED	TOTAL	TK MDM 55/62/72	TANK PT-26 AMPHIBIOUS	APC. BTR. BMP. BRDM	MTRCL	7.62MM LMG PKM	23MM AA GUN 25U-23-4	ATGM VEH AT-23	ATGM MAN PACK AT-3	57MM AA GUN* S-60	73 REC GUN SPG-9	85MM AT GL RPG-7	100MM AT GUN T-12	120MM MORTAR	122MM HOW**	152MM HOW**	122MM FLBM-21	TEL FROG-7	SA-7 GRAIL	TEL SA-9
DIV HQ	93	223	318																			
TANK REGT (3)	399	2649	3048	285	9	45	21	9	12					24							81	12
MOTORIZED RIFLE REGT	177	1938	2115	40	3	117	9	171	4	9	6		6	81		18	6				36	4
ARTY & AA	172	1730	1902			12						24					54		18	4		
RECON BN	35	265	300		7	19	33							5								
SIGNAL BN	27	263	290			4	13															
ENGR BN	38	352	390			10																
CML BN	18	142	160			4																
MEDICAL BN	25	175	200																			
TRANS BN	25	350	375																			
MAINT BN	21	212	233																			
SERVICE ELM	5	95	100			5	5															
TOTAL	1035	8394	9429	325	19	216	71	180	16	9	6	24	6	110		18	60		18	4	117	16

* MAY BE REPLACED BY A SA-8 OR SA-6 UNIT.

** TOWED OR SELF PROPELLED.

Mission

Tank divisions may operate independently or as an element of a larger force together with motorized rifle, airborne, or other tank divisions. The tank army may have three tank divisions, the CAA normally has one. Typical combat missions for the tank division include:

- Destruction of US military force throughout the entire depth of defenses.
- Seizing or dominating critical land areas.
- Covering force for a CAA.
- Reserve for a FRONT.

Division Artillery

Organic division artillery is the same as for the motorized rifle division (see chapter 9) except that the antitank battalion is deleted and the artillery regiment has only 122mm howitzers.

Combat Support and Service Units

The combat support units of the tank division are the reconnaissance battalion, engineer battalion, signal battalion, and the chemical battalion. They are organized in a similar manner to those units subordinate to the motorized rifle division. Service units are also similar to those of the motorized rifle division; however, because of the large number of tanks found in the tank division, the capabilities of the service elements are designed to effectively support this armored force. (See appendix A for organization charts of combat support and service units of the tank division.)

Division Movements

Marches are classified according to objective (advance or withdrawal), urgency (normal or forced), environment (mountains, forests, or open), and time of execution (day or night). Normally the division moves in two or more columns in its assigned zone of advance. Where possible, separate routes are used by wheeled and tracked vehicles in each column, with tracks normally moving off roads. The average rate of march of tank units is 20 to 30 kilometers per hour in daytime and 15 to 20 kilometers per hour at night. A normal day's movement lasts 8 hours and covers from 200 to 250 kilometers; a forced march lasts 10 to 12 hours and covers from 250 to 350 kilometers in a day.

The division normally assigns each regiment two march routes which should be at least 3 kilometers apart. No intervals are assigned between tank companies, but distances up to 5 kilometers are maintained between battalions and up to 10 kilometers between regiments in order to preclude presenting a lucrative nuclear target. Distances between vehicles vary from 50 meters in daylight to as little as 15 to 20 meters at night. In all movements considerable use is made of road guides and coded markers. Depending on the air situation (air superiority or parity, etc.), no-light lines may be established far to the rear or as near as 10 kilometers to the line of contact. Unless lights are authorized, all marches during periods of reduced vision are made under blackout conditions. All drivers receive extensive night training in blackout driving.

Section 2—The Offense

Employment

In the offense, a typical role of the tank division is exploitation. It may also be used to achieve an initial penetration or breakthrough operation. In the defense, the division is normally employed as a counterattack force of a CAA or FRONT. It may be used to defend a zone in the frontlines. In both the offense and defense, tactical doctrine stresses the employment of tank units in the sector of the main effort. Opposing forces doctrine in all cases provides for tanks in conducting a

major battle or operation. The division has the capability to be used in a breakthrough, pursuit, or exploitation operation. It is capable of sustained offensive operations deep into US rear areas. Employment of a tank division is subject to the following limitations:

- Large POL requirement.
- Sensitivity to terrain extremes such as heavily wooded areas or rough terrain/population centers which channel tank movement.
- Heavy maintenance requirements.
- Difficulty in keeping firepower constantly available in terms of ammunition on the tanks. (The unit of fire on most medium tanks is 40 rounds.)
- Difficulty in transporting the unit long distances for employment.

As the primary offensive maneuver element within the ground forces, the tank division is considered the CAA's exploitation force. Its employment is characterized by shock action, mobility, and firepower. The tank division may be employed as part of the first or second echelon, or it may be considered as the CAA's tank reserve. In either case, its mission is to exploit gaps created in the enemy defenses, rapidly penetrate enemy territory, destroy the continuity of the defense, and assist in securing the army's objectives.

The tank division is used to create and maintain shock deep in the enemy rear; prevent or break up the formation of hasty rear defense positions; disrupt enemy command, communications, and logistical installations; and overrun communications centers, airfields, and nuclear weapon launching sites. Its operations are closely coordinated with the operations of the motorized rifle divisions. If the CAA is forced to assume the defensive, the tank division is normally used as a mobile counterattack force.

Opposing forces doctrine permits the tank division to be employed as a first-echelon unit where the mission, terrain, and US forces favor its employment. Good tank terrain, a weak US posture, and a high level of use of nuclear weapons favor the use of the tank division as part of the breakthrough force. It would be used to exploit nuclear breakthroughs, for deep penetration, for enveloping movements, and for exploiting gaps in US formations. Its mission would be to break through US defenses and continue the advance to the army's objective.

As the exploitation force, the division's mission is to exploit gaps created in US defenses by the initial thrust of the motorized rifle divisions' attacks, destroy or isolate small groups of US forces, avoid becoming decisively engaged by bypassing US resistance, and destroy the US corps reserves. It will attack US counterattacks that threaten the breakthrough area. Its operations are directed to destroy the US force's ability to reconstitute an organized defense or engage in an orderly retrograde movement, and are characterized as a series of meeting engagements. At the first sign of US withdrawal, the tank division will initiate pursuit operations designed to divide and destroy the US force.

Regardless of whether the division attacks in the first echelon of a large-scale operation or is committed after the forward US defenses have been breached, its attack is characterized by the utmost violence and aggressiveness. As the decisive element in

the offense, the tank division, once committed, receives first priority from its higher headquarters for reinforcements, air support, fire support, and service support. Thus, its attack is also characterized by its persistence and staying power.

Frontages and Depths

The tank division in the first echelon of an army normally is assigned a frontage of 12 to 15 kilometers in a main attack and 25 to 30 kilometers in a secondary attack. In a nuclear situation the breakthrough zone would be approximately 12 kilometers; in a nonnuclear situation the breakthrough zone would be about 5 to 8 kilometers. Once through US defenses, the width of the attack zone may be extended to 20 to 25 kilometers depending on the mission, US disposition, and terrain.

Movement to Contact

The tank division is assigned a zone in which it advances in multiple columns 4 to 6 kilometers apart on a 15 to 25 kilometer front. ***Organization of the march is normally based on the possibility of contact with the US force at any time and from any direction.*** The approach march is conducted by two tank regiments abreast, each advancing in two tank columns. Where possible, separate paths are followed by wheeled and tracked vehicles in each column with tracked vehicles normally moving off roads. An advance guard, normally consisting of a reinforced motorized rifle battalion, is sent out by each lead regiment. The advance guard overcomes local opposition or, if possible, bypasses it and still keeps the main body from being forced to deploy. Every effort is made to advance as far as possible before deployment.

The flanks of the zone of advance are protected by supporting aircraft and flank security strong in tanks and air defense artillery. The flank security, operating at approximately 3 to 5 kilometers from each echelon, may move over lateral routes to occupy stationary posts during the passage of the column and then join the tail of the column. As required, new flank security is assigned from forces organic to the column.

The tank division may employ tank-infantry teams, or the division reconnaissance battalion, as the division reconnaissance screen up to 100 kilometers forward of the main body of the advance guard. Normally they bypass encountered enemy forces, where possible, report their location, and continue to advance.

Control measures used in the advance include routes of march or zones of advance, phase lines, line of deployment, and an assault line. Whenever possible, tanks are carried on wheeled transports until enemy contact is imminent.

CBR reconnaissance is continuous by all elements. Deployment of columns only takes place when necessary to overcome resistance that is holding up the advance and cannot be bypassed. The second echelon follows in dispersed battalion columns at a distance of up to 20 kilometers.

Attack Formation

The tank division usually attacks in two echelons. The first echelon usually will consist of two reinforced medium tank regiments. It may consist of a medium tank regiment and the motorized rifle regiment reinforced. The second echelon will consist of the remaining tank regiment and/or the motorized rifle regiment. No tank reserves as such are retained by the tank division commander.

The tank division may organize combat teams based on two medium tank regiments by attaching to each a motorized rifle battalion. It may also organize combat teams around the motorized rifle regiment if appropriate to the situation. Attachments are made one way: the required reinforcements usually come from second-echelon units, and cross-attachments are not normal.

Conduct of the Attack

Maneuver elements of the tank division normally attack from an approach march formation. The tank division can rapidly concentrate its power, deal with the problem, and quickly disperse. The attack position normally is 3 to 5 kilometers from the line of departure. Primary attention is devoted to uninterrupted movement of the two regimental first-echelon battalions from regimental column through the successive stages of deployment to a simultaneous assault by the entire first echelon. Great care is taken to insure that speed and routes of movement are synchronized toward this end. Whenever necessary, extensive engineer support is devoted to preparing routes of movement and breaching obstacles to insure the unimpeded advance.

After deploying for combat, the immediate mission is to penetrate the US defenses to a depth of 12 to 15 kilometers to destroy the tactical reserves. Primarily, the offense will be a series of meeting engagements, or attacks from the march by first-echelon troops who bypass strong resistance, roll over hasty defenses, and rush on to the objective, leaving mopping-up operations to second-echelon troops. Only when the terrain, enemy dispositions, or time consideration so dictates will there be a coordinated deliberate attack against prepared defenses.

When the forward defenses are passed, attacks are made on the flanks and rear of US positions wherever possible. Moving rapidly, the tank division overruns and destroys isolated US units. If resistance is too great, the assault is broken off, containing forces are left to await the arrival of motorized rifle units, and the tank forces move on. Crossroads, bridges, and other terrain features that will result in cutting of US forces are seized. US command posts, logistical installations, and weapons depots are overrun. Every effort is made to retain the initiative and maintain the impetus of the attack. ***The tank division concentrates on rapid slashing attacks and leaves the destruction of strong centers of resistance to the motorized rifle divisions.*** If the US force commits sizable reserves, the tank division blocks them with motorized rifle forces or requests nuclear fires and continues the advance. In the exploitation phase, operations of the tank division are characterized as a series of meeting engagements.

A tank division in the second echelon would normally be employed in a similar manner after it is committed. The division is assigned a line of commitment which

it should reach at the same time as the first-echelon assault divisions. The main body moves to the departure area in a dispersed formation, arriving about one hour after the assault has begun. At this point, division artillery which has been supporting the attack reverts to division control. The division deploys at the line of commitment and enters combat through a gap between the first-echelon divisions or from an exposed flank. Usually attacking from the march, the tank division attempts to penetrate the US force's second defense zone. When a counterattack by US reserves is anticipated, the tank division will be assigned the mission of destroying these forces; it will normally occupy an area favorable for defense with minimum forces deployed to halt the counterattack and the bulk of forces maneuvering to destroy the US forces from the flank or rear.

Because of the extremely deep objectives of its superior headquarters, the tank division in the offense normally pays minimum attention to problems of security and consolidating an objective and the subsequent assumption of the defense. Instead, the commander plans forward operations to maintain forward momentum. If a tank division is halted and forced to take up the defense temporarily, the higher commander attempts to reinforce it sufficiently to allow resumption of the offense.

Section 3—The Defense

Employment

Opposing forces doctrine on the employment of tanks has undergone substantial revisions. They prefer to employ antitank weapons against tanks but they are no longer reluctant to engage in tank versus tank combat. Opposing forces have also integrated the use of tanks into their artillery fires. For this purpose tanks are deployed on reverse slopes where they employ indirect fire at long ranges. Maximum advantage is taken of the tank's mobility to shift firing points and evade detection by US target acquisition means.

The tank division is considered primarily an offensive unit; and in circumstances where it is forced to assume the defense, attempts will be made to relieve it with a motorized rifle division. The tank division is normally employed in a counterattack role during the defense, and is usually located in or behind the area of the second-echelon forces.

The tank division is prepared to conduct a defense if required to gain time to mass necessary forces to continue the offense, to consolidate captured positions, or to repel US ground attacks. In this case, the tank division may be employed in a first-echelon role, or be charged with the defense of the second defense belt. As a first-echelon force, the division would be assigned the defense of the most vital sector or of that sector where an armor-heavy US attack is expected. As a second-echelon force, the tank division would prepare defensive positions but would remain in dispersed assembly areas to the rear from which it could move rapidly to counterattack or occupy these positions as required to defend the second defense belt.

Organization

The tank division in the first echelon will normally be assigned to defend a zone 20 to 30 kilometers wide. The depth of the defense zone will be 15 to 20 kilometers. The tank division normally defends in two echelons in a manner similar to the motorized rifle division. On an extended front, the division may defend with only one echelon and reserve.

The first echelon usually consists of two medium tank regiments, each reinforced with up to a battalion of infantry from the motorized rifle regiment. Forces in this echelon defend in battalion defense positions similar to motorized rifle defense positions except that they are generally smaller.

The third regiment usually constitutes the second echelon; however, it does not occupy battalion defense areas and is used to execute counterattacks or repel US tanks. It may also be employed in the first echelon.

The motorized rifle regiment may be employed as the commander's contingency force and held in reserve. It is used primarily to reinforce and support the defense of the first echelon. However, in some cases it too may be employed intact in the first echelon and assigned an independent sector.

The division will organize its defense within the limits of its assigned zone; normally, with one forward position and one or more subsequent positions. If efforts are to be concentrated in holding the first positions, the division will attempt to repel the US force forward of the position or eject it through counterattacks if the US force penetrates the position. If planning has been directed to holding subsequent positions, the division will employ a mobile defense in its zone. In either case, subordinate units are expected to defend in position until they receive further orders. **Unauthorized withdrawals are strictly prohibited.** In cases where the mission requires that the main effort be made to hold the first defensive zone, a security zone will be established by the division. Reconnaissance and covering forces, which will be armor-heavy, seek out the US force and maintain contact forward of the security zone. Tank ambushes, patrolling, and observation are organized in front of the defense zone in the depths of the defense and also in gaps or on the flanks.

Normal fire support is organized with artillery, air defense, and air support. Antitank defense forms the basis for the defensive system. Antitank strongpoints are organized at all echelons and consist of antitank guns, rocket launchers, flamethrowers, and obstacles. The division antitank areas are dispersed laterally and in depth. Antitank obstacles are organized in the gaps and are covered by antitank artillery, mortar, and small arms fire. To complete the antitank system, the division commander employs engineer mobile obstacle detachments, air strikes, roving antitank artillery, and a warning system.

The concept of the defense is based on battalion defense areas which consist of company strongpoints organized for all-around defense. Gaps between the company strongpoints within battalion defense areas (up to 2 kilometers is permitted) are covered by obstacles, ambush sites, artillery, and mortar fire. The battalion is reinforced with infantry.

Conduct of the Defense

During the defense, the tank division may be employed in delaying actions, defense of the main or secondary defense zone, or in a counterattack. In all these defensive situations, the division conducts a stubborn defense while always maintaining an aggressive posture constantly attempting to seize the initiative. ***The tank division inflicts maximum punishment on the US force at all times, and does not give up territory unless it is forced to do so.***

As the US force approaches the defense positions, it is engaged by the security forces. The security forces attempt to deceive the US force as to the exact location of the defense and to cause it to deploy early. On order the security forces withdraw and the US force is engaged by the frontline units as far forward as possible from the main defense zone. Violent resistance is emphasized at all times.

As the US force closes into assembly areas or starts to deploy for combat, the area commander may order a counterpreparation to be fired to disrupt US attack preparations. The tank division's role in the counterpreparation may be confined to participation in the artillery barrage or the use of indirect tank fires. Another tactic that can be employed is the use of the reconnaissance in force or limited objective attacks. The tank division may be assigned to control the reconnaissance in force or to conduct tank-heavy attacks against the US forces that have suffered the most damage from the counterpreparation.

The defense is conducted based on holding assigned defense areas throughout the main defense zone. When the assault is launched, defensive fires reach their maximum intensity and are concentrated on destroying the attacking tanks. Fires are directed at the most dangerous US forces and the division commander may move up tanks and artillery from the depths of the defenses or from areas not under attack. While the tanks attempt to destroy the US forces, attached infantry are committed to destroying the attacking infantry.

If the US force succeeds in penetrating the defense area, the division commander institutes measures to halt the progress of the attack, destroy those forces which have effected the penetration, and restore the defensive positions. Forces from the second echelon and reserves are moved to the most threatened sectors and elements in the main defensive area are regrouped in anticipation of a counterattack. Where the US possesses a superiority of force, the division will continue to defend instead of counterattacking, attempting to create favorable conditions for a counterattack by higher headquarters.

The Counterattack

The peak defensive intensity is reached at the time of the counterattack which may be conducted at any level with approval of the higher commander. Counterattacks in the main defense zone are launched only by battalion and larger units and are directed against penetrations which have been successfully contained. The timing of the counterattack is critical since the US force must be caught before it can establish its own defense. The objective of the counterattack

is to seal off the penetration and destroy the encircled US forces. The containing forces support the counterattack with fire and they may also assault the US force from their defensive positions.

When the tank division is assigned the role of the army's counterattack force, it employs tactics similar to those discussed under offensive operations. The tank division counterattacks with all available forces and avoids piecemeal action. The counterattack would normally be launched in two echelons if adequate maneuver space is available.

Upon successful execution of the counterattack, defenses are reestablished in anticipation of successive attacks by the US force. If favorable conditions exist, the division takes the necessary steps to prepare for resumption of the offense. If the counterattack is unsuccessful or if no counterattack is launched, troops are required to defend in place until further orders are received.

Withdrawal

Withdrawal is a two-step process (disengagement and retirement) conducted in a concealed, well-organized fashion. Withdrawal is conducted only on order and usually occurs at night although a daylight withdrawal may be conducted if required.

The tank division may be assigned to cover the CAA's withdrawal but normally it withdraws with the main body of the army. A rear guard, normally a reinforced tank regiment, is the first unit to withdraw from the frontlines; it moves to the rear and occupies a delaying position. The main body withdraws through the rear guard and then moves to the division's next assigned position. A covering force composed of small tank units protects the withdrawal of both the rear guard and the main body. It remains in place for a designated period of time and then joins the rear guard. The rear guard continues to defend in successive delaying positions for a specified period of time.

After disengaging, the main body deploys into march columns and retires to the next defense position. The main body may be deployed to attack any US forces which are attempting to cut off its route of withdrawal. In this case, tank units would attack from the march, supported by motorized infantry, artillery, and air.

Chapter 11

Section 1—Organization

THE COMBINED ARMS ARMY

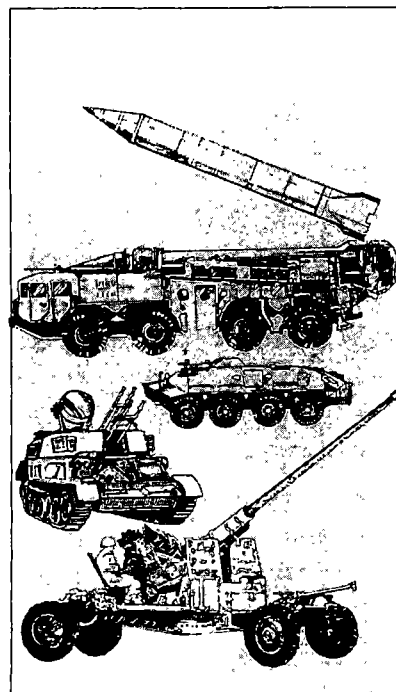


TABLE OF CONTENTS

Section 1

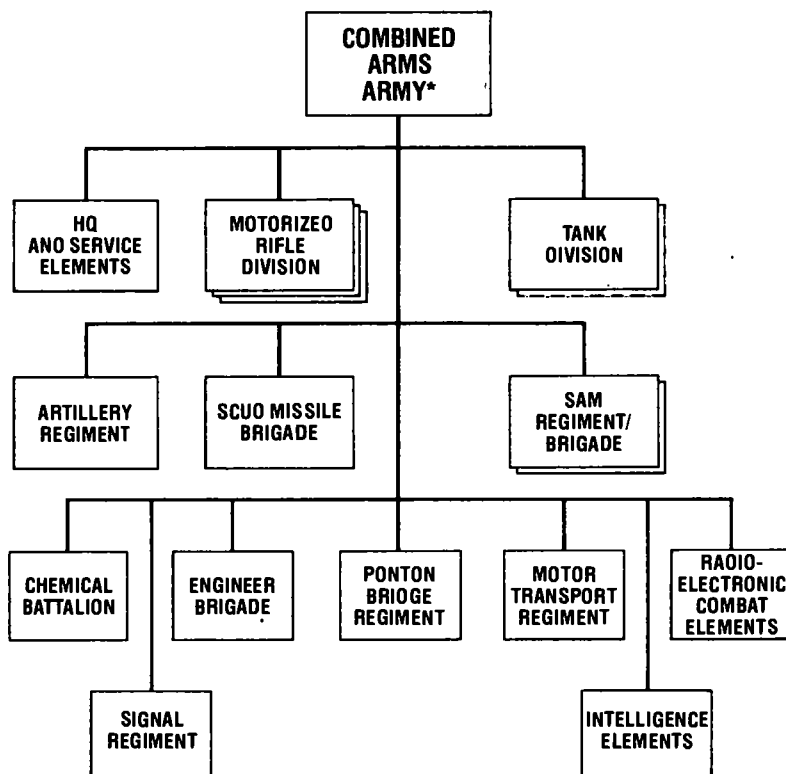
Organization	11-1
General	11-1
Mission	11-2

Section 2

The Offense	11-2
General	11-2
Attack Formation	11-2
Frontages and Depths	11-2
Artillery	11-3
Advance to Contact	11-3
Conduct of the Attack	11-5

Section 3

The Defense	11-5
Security Zone and Main Defense Belt	11-5
Second Defense Belt	11-6
Third Defense Belt ...	11-6



*IT SHOULD BE NOTED THAT THERE IS NO FIXED ORGANIZATIONAL STRUCTURE ABOVE DIVISION LEVEL
NO TWO ARMIES ARE EXACTLY ALIKE

General

The combined arms army, a tactical and administrative organization, is the basic field army. A typical combined arms army would have, as assigned elements, three motorized rifle divisions and two tank divisions. Combat support and service units normally include an artillery regiment, missile artillery units, signal, chemical, engineer, and intelligence units. The balance of its composition between motorized infantry, armor, and artillery permits the combined arms army to have great versatility in either an offensive or defensive role. Most subordinate units are identical in organization to those found at the FRONT level. Some elements may be at battalion strength rather than regiment or brigade. Usually, units will be attached from the FRONT to augment or support the combined arms army for periods of time, depending on the army's mission. (Organization charts for combat support and service units of the CAA may be found in appendix A.)

Mission

The mission of the CAA in the first echelon of the FRONT is to destroy enemy resistance in the main battle area and to create gaps large enough to permit employment of large mobile forces of the FRONT, such as the tank army or the second echelon CAA. The army is expected to advance far enough in the first few days of the offensive to destroy the continuity of the tactical defenses of the US forces, including the corps reserves. In accordance with the FRONT scheme of maneuver, the advance is continued for further operations against deep US reserves and for destruction of the encircled US forces.

The CAA in the second echelon of the FRONT is used to:

- Widen gaps created by the first echelon.
- Outflank US defenses.
- Block counterattack against the army flanks.
- Destroy encircled or bypassed US forces.
- Reinforce the first echelon.

Section 2—The Offense

General

The CAA in this section deals with the CAA in the first echelon of the FRONT. Generally, it is also applicable to the CAA of the second echelon of the FRONT when committed.

Attack Formation

Usually, the CAA attacks in two echelons. When attacking a weak opponent, or as part of a secondary effort, the CAA may attack in one echelon. The army usually does not attack in three echelons unless assigned to a very narrow attack zone. The first echelon of the army usually consists of two motorized rifle divisions. The second echelon consists of a motorized rifle division and one or two tank divisions. The army's second echelon is initially dispersed in assembly areas 15 to 30 kilometers to the rear of the first echelon. It maintains close liaison with the first echelon and moves on order. If the terrain, expected resistance, and available combat support permits, a tank division will be used in the first echelon. In that event, the first echelon will consist of two motorized rifle divisions and one tank division; and the second echelon will consist of one motorized rifle division and an additional tank division if available. Reserves may consist of a motorized rifle regiment or separate motorized rifle or tank units made available by FRONT, in addition to artillery and engineer reserves. The tank division may be considered as an exploitation force separate from the second echelon.

Frontages and Depths

The CAA making the main effort for the FRONT, in either a nonnuclear or nuclear environment, normally will have an attack zone of about 20 to 30 kilometers. A CAA making a secondary attack will have an assigned FRONT of up to 80 kilometers. The width of the actual zone used may be less than the frontage assigned. The depth of the CAA normally is about 100 kilometers.

Artillery

CAA organic and attached artillery is divided and allocations are made much in the same manner as division artillery, with priority to first-echelon main attack forces. Second-echelon forces, when committed, would be allocated sufficient artillery support to enable them to carry out their mission.

Advance to Contact

Planning. Plans for the advance to contact are as detailed as time permits and are based on information about the opponent, weather, terrain, and the scheme of the anticipated battle to include planned nuclear fires. Particular attention is paid to passive defense measures against nuclear attack, antitank, air defense, antiairborne, security, and tactical cover and deception measures.

Air Support. All available aircraft support the advance. Air support provides continuous reconnaissance, assists in destruction of forces interfering with the advance, attacks US reserves, delivers nuclear fires, and provides column cover. Air liaison officers, who can either call for air support or direct column cover aircraft to specific targets, accompany all regimental and higher headquarters and principal security elements.

Movement. Marches normally are made at night or during limited visibility. Unopposed marches are continued without interruption until contact with the US force is made. March deception plans are normal procedure. Feint marches on different routes may be made.

Advance Guard. Advance guards normally are assigned the following missions:

- Screen and secure the advance of the main body.
- Seize key terrain features until the arrival of larger forces.
- Determine the US force's composition, disposition, and defenses, with particular attention to its nuclear capabilities.

The composition of the advance guard varies with the tactical situation, terrain, and size of the unit. The advance guard usually is composed of reconnaissance, motorized rifle, tank, engineer, artillery, and chemical units. The advance guard moves by bounds from one terrain objective to the next. Advance detachments from the advance guard may be sent forward to seize specific terrain features until the arrival of the advance guard. These terrain features include road junctions, obstacles, and defiles.

Ground Security. All march elements are responsible for their own security in all directions. Security elements prevent surprise attacks by the US force on the main body and permit deployment of the main body under favorable conditions. Security is furnished by advance, flank, and rear guards and march outposts. Flank and rear guards move in coordination with the main body or establish a series of outposts protecting the passage of the main body. Strength and composition of security elements depend on the mission, the opponent, terrain, size of the unit being protected, and the time it requires for deployment. Security elements are normally reinforced with artillery, tanks, SP guns, engineers, and chemical units as required.

Air Defense Security. Great care is taken to insure proper protection against air detection and/or attack. Measures taken include:

- Ground and air observation and warning nets within all march elements.
- Camouflage measures and use of routes concealed from air observation.
- Coordination of ground air defense fires with employment of fighter aviation.

Air defense artillery may be attached to battalions serving as advance guard or to any advanced detachment element. Organic air defense artillery is dispersed within the column of the units. On receipt of an air alarm these weapons are halted at the roadside and are prepared to engage US aircraft. They may be sent ahead, protected by the advance guard, to cover the passage of the unit through defiles. Medium caliber and larger air defense artillery and missiles attached to the division and larger units protect columns by moving by bounds in echelon. Several parallel columns may be protected simultaneously.

Antitank Security. Antitank warning nets are established within all march elements. All march elements contain SP guns and/or antitank guns. When contact is likely and the US force has an armor attack capability, security elements are reinforced with additional antitank weapons. When the advance is threatened by an imminent armor attack, antitank guns take up firing positions. These positions may be in advance of the column they are protecting. Hasty, temporary minefields may be set out if time permits. These mines are recovered when the advance resumes.

Chemical, Biological, and Radiological (CBR). All units are responsible for continuous CBR reconnaissance in their zone of advance or along their march route. Chemical reconnaissance units from the CAA chemical battalion may be attached to the lead element to assist in CBR reconnaissance. Plans are made prior to the march for area decontamination. Announced radiation operation exposure guidance for individuals may be exceeded temporarily by the CAA commander to permit rapid passage of radiological contaminated areas that cannot be readily bypassed. This is done when absolutely necessary to accomplish the mission.

Engineer Support. Engineers assist in reconnoitering roads, defiles, bridges, river crossings, bivouac sites, and water supply sources. They also mark march routes, prepare cross-country routes, repair and strengthen bridges and roads, and clear obstacles and passages through radioactive areas. Mobile obstacle detachments (MOD) are formed from organic engineers as required. These MOD's vary in strength from a platoon to a battalion, and they may be reinforced by infantry and antitank weapons. By laying hasty minefields they provide immediate protection for the advancing columns and for the exposed flanks and approaches.

When possible, the CAA advances in its assigned zone in two or more columns with all divisions on one or more separate parallel routes. Two divisions may move in column on one route. The road space between divisions moving on the same route may be up to 6 kilometers. A motorized rifle division (reinforced) screens to the FRONT. Nondivisional elements of the CAA may be attached to

divisions and integrated into division columns or formed into separate columns marching on the same or different routes. Nondivisional columns are normally provided their own air defense protection. The CAA antitank reserve is echeloned in the most likely direction of US armor threat and moves by bounds.

Conduct of the Attack

Strongpoints that hold up the advance are bypassed and reduced by the CAA second echelon. Strong US counterattacks are dealt with by fires or by the second echelon. The second-echelon is committed without hesitation to maintain the momentum of the attack. If the US force uses nuclear or chemical fires, the offensive continues with minimum necessary reorganization. If necessary, unit replacements are made promptly from the CAA reserve or FRONT reserve forces. Once the CAA objective has been captured, strong security detachments remain to secure the objective and the major elements move to dispersal areas and prepare to continue the advance.

Section 3—The Defense

Security Zone and Main Defense Belt

Units in the security zone normally employ delaying action followed by withdrawal. Security zone forces halt or delay the US force by forcing it to deploy and prevent US reconnaissance units from reaching the main defense belt. Close contact with the US force is maintained. If required, tank-heavy reserves are employed to assist in disengaging the first-echelon units. The delaying force withdraws through the main defense belt to the second defense belt. Stay-behind forces are often left in the security zone to execute intelligence and sabotage missions, attempt to locate US nuclear delivery means, and to determine US attack formations and the time of attack.

As the US force approaches the main defense position, it is subjected to continuous heavy fires from all available means. Reconnaissance is intensified. Troops are alerted to occupy prepared protective shelters to minimize the effects of fires delivered by US weapons.

Counterpreparatory fires are readied and fired on order of the CAA commander. Authority to fire a counterpreparation may be delegated to division commanders. Nuclear fires, as available, are included in the counterpreparation. Preferred targets for counterpreparatory fires are US units in assembly areas and nuclear delivery systems.

If the US force overruns or penetrates the main defense belt, the CAA normally launches a counterattack with the tank division and available elements of the motorized rifle division engaged, supported by nondivisional reserves of tanks and other support weapons.

The CAA counterattack usually is carried out by the tank division. If other elements of the CAA reserve have not been previously committed, they may also be used in the counterattack. Counterattacks are directed at the flank and rear of

US penetrations. Nuclear fires may be used on deep penetrations. If necessary, the counterattack forces pass through radiologically contaminated areas to reach the US force.

Full use is made of motorized rifle AFV's to speed the counterattack. Motorized rifle units normally will not dismount until forced to do so by US fires. If the US penetration has been neutralized by fires, the motorized rifle units may advance through this penetration in their AFV's. This type of carrier-borne counterattack is continued until stopped by the US force or until the final objective is gained.

If the counterattack fails, forces are withdrawn from the main defense belt to take up positions in the second-echelon defense belt. From the third defense belt, the FRONT's second echelon launches a counterattack to regain the lost territory. All withdrawals are protected by fires and counterattacks by elements of the CAA second echelon.

Second Defense Belt

The tank division, held in assembly areas near probable areas of US penetration, counterattacks from the vicinity of the second defense belt to destroy US penetrations of the main defense belt. It may be used to counteract in adjacent zones also.

The CAA reserve, normally located in the third defense belt, may be employed in the second defense belt to block the US advance while the tank division counterattacks.

The force and speed of the US advance may require the CAA tank division, initially, to occupy prepared positions in the second defense belt to halt the US penetration.

If the CAA fails to eject the US force from the main defense belt, through either failure of the counterattack or inability to execute it, elements of the motorized rifle divisions that are engaged withdraw from the main defense belt and take up positions in the second defense belt.

The forces occupying the second defense belt defend their respective areas in a manner similar to that employed by the motorized rifle division in the defense of the main defense belt, except that the tank division employs its second echelon as a division counterattack force.

CAA forces occupying the second belt support the counterattack or counteroffensive of the CAA group launched from the vicinity of the third defense belt.

Third Defense Belt

The CAA reserve, held in assembly areas or near this belt, is employed as a contingency force. It may be used to replace units destroyed by US action, to block US penetrations, or to counterattack in either the main or the second defense belt.

If it appears that the US force is succeeding in penetrating the second defense belt, the CAA reserve conducts a counterattack to block the penetration.

If the counterattack fails or cannot be mounted, the reserve occupies prepared defensive positions in the third defense belt.

From the third defense belt, the FRONT's second echelon (the tank army) launches either a counterattack or a counteroffensive.

Chapter 12

THE TANK ARMY

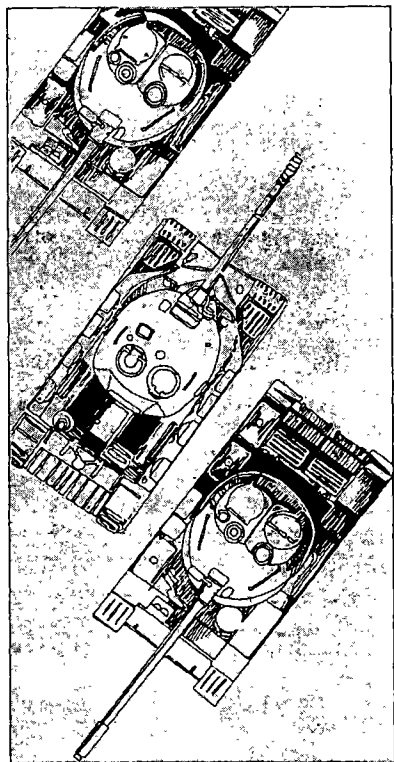


TABLE OF CONTENTS

Section 1

Organization	12-1
General	12-1

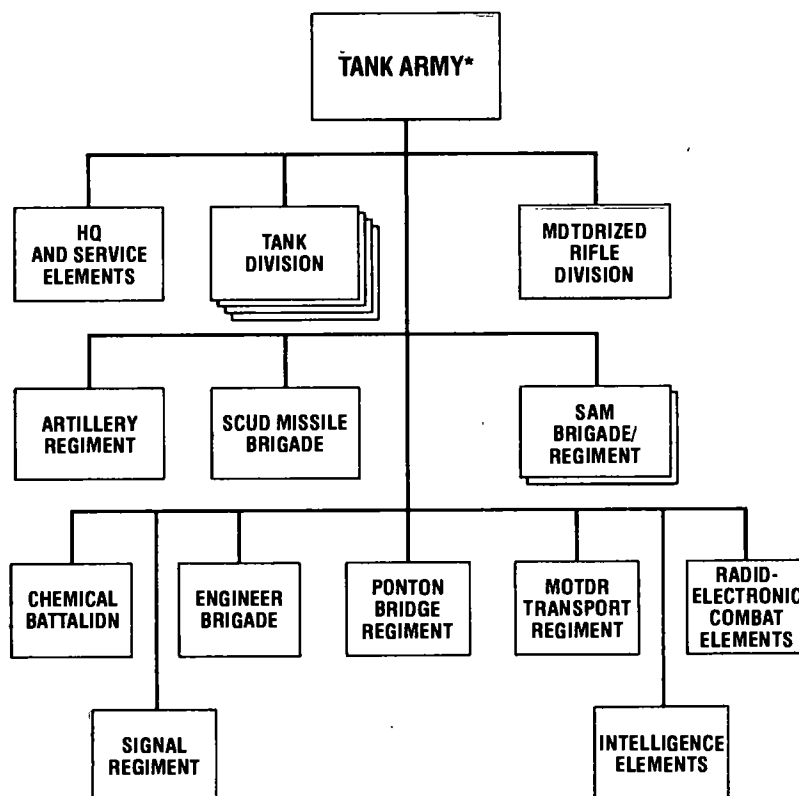
Section 2

The Offense	12-2
General	12-2
Attack Formations ..	12-2
Artillery	12-2
Conduct of the Attack	12-3
Employment	12-3
Logistics	12-3

Section 3

The Defense	12-3
General	12-3
Organization	12-4
Conduct of the Defense	12-5

Section 1—Organization



*THE ACTUAL STRUCTURE OF THE TANK ARMY DEPENDS UPON THE MISSION AND AREA OF OPERATIONS

General

The tank army is a highly mobile, heavily armored force expressly designed to exploit any rupture in US defenses and to penetrate deep into the US rear areas. It is a tactical and administrative unit capable of independent operations; however, like the CAA, its normal employment is as a component of a FRONT. The mix of its armor and motorized rifle divisions is dependent upon the mission and areas of operations.

Combat support and service units in the tank army are identical in organization to those units subordinate to the CAA. Because of the mobility of the tank army and its deployment as an exploitation force in the offense and as a counterattack force in the defense, subordinate service and support units are so equipped as to enable them to be as mobile as the tank units. This permits these units the capability of providing continuous support to the army. (Organization charts for combat support and service units of the tank army may be found in appendix A.)

Section 2—The Offense

General

The tank army is the FRONT's exploitation force. It is committed as soon as a gap at least 20 kilometers wide is created in the US defenses. Its early commitment is designed to catch the US force off-balance, complete the encirclement of US forward forces before they can be reinforced, and exploit the effects of nuclear or chemical fires.

Where US defenses are weak, the terrain suitable for widespread tank operations and the high-level use of nuclear weapons envisioned, the tank army may be used in the first echelon of the FRONT. Capitalizing on the characteristics of the tank for shock action, speed, and partial protection from the effects of nuclear weapons, the tank army is expected to break through US defenses rapidly and immediately initiate the exploitation phase.

Attack Formations

The tank army normally attacks in two echelons. A one-echelon formation may be used against a weak or overextended US force. A three-echelon formation is seldom used. In those tank armies having four tank divisions, each echelon will contain two tank divisions; otherwise, there will be two tank divisions in the first echelon and one in the second.

The first echelon of the tank army usually attacks in parallel division columns preceded by strong, advanced detachments reinforced with artillery and antitank guns. The second echelon follows about 30 to 35 kilometers to the rear of the lead elements.

Frontages and Depths. The tank army is committed when a gap at least 20 kilometers wide and 40 kilometers deep is formed in the US defenses. Once the breakthrough area is passed, the tank army deploys in two columns of two divisions each in a zone up to 80 kilometers wide. The depth of the tactical formation is about 100 kilometers.

Artillery

The tank army also allocates part of its assigned and attached artillery to its subordinate first-echelon divisions, retaining the remainder in tank army provisional artillery groups. The second echelon is allocated artillery from the first echelon or the army artillery groups when committed.

Conduct of the Attack

When the situation will permit, a short but intense air and artillery preparation (30-60 minutes) is fired by all available means in the area prior to the commitment of the tank army. If necessary, the artillery of the first echelon of the tank army participates in this preparation. If the US force is very weak or has been completely neutralized by nuclear fires, the nonnuclear preparation may be omitted.

The tank army advances to forward positions with the divisions of its first echelon in column formation. Deployment of the first-echelon column takes place only when required by US resistance.

The tank army attempts to maintain its momentum and shock action in driving for the FRONT objective. Resistance that cannot be overcome rapidly is bypassed. If necessary, contact with the CAA's is broken in order to continue the advance to the objective. Destruction of encircled US forces is left to the motorized rifle divisions of the CAA's. The tank army is expected to destroy any threats to the breakthrough area from US forces advancing to the relief of their encircled units. At the first indication of a US withdrawal, the tank army starts in pursuit, and the securing of the army FRONT objective is assigned to a CAA.

Employment

The employment of the tank divisions of the army is essentially the same as that of the tank division (see chapter 10).

Logistics

The tank army has an organic capability of advancing from 320 to 520 kilometers after commitment, depending on the terrain and the opponent's strength.

The tank army attaches sufficient transportation to the tank divisions to enable them to be self-sufficient for each phase of an operation. Resupply from army supply points is made at the end of each phase. For large-scale offensives, tank divisions are logistically self-sufficient for about 6 days when reinforced with transportation units.

Section 3—The Defense

General

While the tank army is designed to neutralize or destroy the opponent's strategic reserves and to seize the FRONT's objective, it is not well suited to static defensive operations. Defensive combat by the tank army is avoided whenever possible. Therefore, during a defensive stage, the tank army is held in reserve as the FRONT's counterattack force.

Opposing forces doctrine dictates that the tank army will not be employed to hold an occupied area, to repel an attack of a superior opponent's force, or to deplete the offensive strength of an opponent to create favorable conditions for transition to a decisive offense. These are the missions of motorized elements in that it is these units which conduct a stubborn defense in a series of defensive positions

echeloned in depth in the tactical defense zone. While this is being accomplished, the FRONT augments the defense by employment and maneuver of its highly mobile tank army in counterattacks and counteroffensives launched from behind the tactical defense zone.

In the defense the tank army's vulnerability to nuclear destruction is reduced by dispersion of forces, both laterally and in depth, by digging in the equipment and by executing movements rapidly.

Organization

The tank army defends as a first-echelon unit only if a situation demands it, and then only temporarily. In this case the FRONT commander makes every effort to replace the tank army at the earliest possible time with a CAA. The tank army is redeployed to a sector of offensive action or to prepare and execute a counteroffensive.

The ultimate objective of the defense in an area of strategic significance is to launch a counteroffensive. The counteroffensive is executed by the FRONT, and tank armies constitute the main striking force. A series of counterblows successfully executed by one or more combined arms armies develop favorable conditions for the FRONT to launch the counteroffensive. Such action is often employed as the forerunner of a general large-scale offensive operation.

The FRONT in defense is typically organized into defensive belts and a FRONT counterattack force. The FRONT counterattack force is normally composed of the tank army located to the rear of the second defensive belt or in the vicinity of the third defensive belt.

The FRONT's defensive depth of responsibility may extend up to 400 kilometers or more. Within this zone the first-echelon armies are responsible for a depth of about 100 to 120 kilometers. In addition, army responsibility includes a security zone of up to 20 to 30 kilometers forward. Initially, second-echelon and counterattack forces are dispersed and uncommitted and take special precautions against US nuclear strikes. Prior to an expected US attack, the second echelon of one or more CAA's and the tank army move into the zone of the first-echelon army to be in readiness behind the enemy counterattack force and the army second-echelon division or divisions. The overall result is that the entire FRONT becomes one deeply echeloned defense system, with the bulk of its forces located in the rear zones.

The tank army, located in the rear defense area of the army and composing the army's counterattack force, is the key to the defense of the FRONT zone. The mission of the FRONT in this zone is to prevent the US forces from completing a breakthrough of the area. This is accomplished by conducting a series of large-scale counterblows rather than by an active defense in place. Also located in this rear defense belt with the tank army are the second-echelon armies of the FRONT. These strategic rear defense belts are established under FRONT control and have as their mission the prevention of the development of a breakthrough of strategic significance in that it is possible that such a breakthrough

would not only endanger the defense of the FRONT, but would also jeopardize the planning and conduct of the overall defense of adjacent army FRONT. Therefore, opposing forces maintain that if an extension of US breakthrough is to be prevented, decisive action must be taken no later than the time when the US penetration reaches the army rear area.

Conduct of the Defense

Should the first- and second-echelon defense belts collapse, the CAA's would conduct a series of counterattacks, coordinated with nuclear strikes and supported by FRONT aviation. A powerful nonnuclear artillery preparation under FRONT control, coordinated with the artillery support of adjacent armies, tactical air support, and missile support, may precede the counterattack if the US force temporarily delays the continuation of its attack. The counterattack may be launched against an advancing US force without artillery preparation. The counterattack force receives two missions: immediate and subsequent. The immediate mission may be the destruction of the US force in front of the second defense belt and the recapture of the third defensive line of the first defense belt. The subsequent mission may be the recapture of the second and first defensive lines. If the counterattack fails or does not at least lead to the recapture of the third defensive line of the first defense belt, and if the army's tank division is forced to disengage, fall back, and seal off the second defense belt, the army has failed to accomplish its defensive mission, even if the US force had not yet completed the tactical breakthrough.

The FRONT is confronted with a grave situation when the entire defense system of the tactical defense zone has collapsed. The basic mission is to prevent a US breakthrough; the CAA's will conduct a series of counterblows in their zones. If these counterblows are unsuccessful, the US force is then able to overrun the rear defense belts. At this time, the FRONT must succeed in completing a major regrouping for launching a decisive counteroffensive.

The counteroffensive may develop from one or a series of counterblows successfully executed by the armies. The counteroffensive is planned and prepared by the regional command and executed by one or more FRONTs. The tank army, supported by at least one CAA of the second echelon of the FRONT, represents the main striking force of the FRONT. The counteroffensive is carried out in accordance with principles similar to those stipulated for an offensive operation, with the exception that the planning and preparation take place under critical conditions and in a defensive operation when the opponent apparently is in full control of the situation.

The objective of the counteroffensive is to prevent a complete breakthrough of the FRONT defensive system. A counteroffensive is normally initiated by rested tank and combined arms armies at the point where the US force lacks effective reserves. This counteroffensive force may be predesignated for this mission or constituted from a major regrouping directed by the homeland.

In view of the difficulties of a large-scale regrouping and the time required for troop movements, the ratio of forces will seldom be in favor of the defender.

Therefore, the defense must be continued to gain time. However, because of the exhaustion of the US force, favorable conditions may arise to launch the counteroffensive quicker and to defeat a US force of equal strength. This is especially true if the counteroffensive is preceded by a nuclear preparation.

In order that a counteroffensive may develop swiftly into a general offense, it must begin at the time when the US force is still attacking and before it has had an opportunity to establish its defenses. As in the case of the army counterblow, all forces of the FRONT resort to the counteroffensive spearheaded by the tank army. Successive counterblows by the armies, transformed into a counteroffensive, may often be used as the vanguard of a general large-scale offensive operation. Such a counteroffensive seeks to destroy the US force in the entire depth of its advance, with subsequent development of a general offensive operation to extend far beyond the original main battle area into the US force's rear.

Chapter 13

THE FRONT

Section 1—Organization

TABLE OF CONTENTS

Section 1

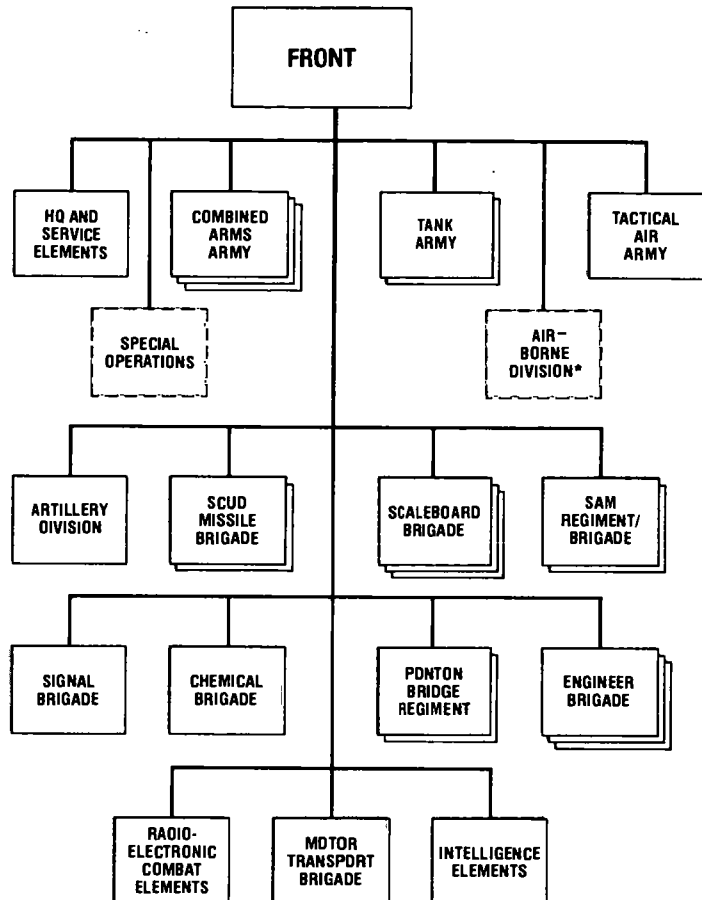
Organization	13-1
General	13-1
Tactical Air Army	13-2
Airborne Division	13-4
Artillery Division	13-5
Surface-to-surface SCUD and SCALEBOARD Brigades	13-6

Section 2

The Offense	13-7
General	13-7
Phasing of Major Offenses	13-7
Planning for the Offense	13-8
Frontages and Depths	13-8
Formations	13-9
Concentration for the Offense	13-9
Tactical Employment	13-10
First Echelon	13-10
Exploitation Force ..	13-10
Second Echelon	13-11
Preparatory Fires ...	13-11
Artillery	13-11

Section 3

The Defense	13-12
Conduct of the Defense	13-12
Organization for the Defense	13-12
OPFOR Large- Scale Offensive Operations	13-13
OPFOR Large- Scale Defensive Operations	13-14



*MAY BE INCLUDED IN A FRONT

General

A FRONT performs tactical, administrative, and logistical functions. A type FRONT might contain three CAA's, two tank armies, one airborne division, one artillery division (deployed by regiments and battalions), two or more surface-to-surface SCUD and SCALEBOARD brigades (deployed by battalions), and other combat support and service units. *The FRONT is a very flexible organization and reflects the opposing forces perception of the mission, opponent, and terrain.*

This manual provides order of battle for three FRONTS and various unlocated units in appendix B. The Northern FRONT has two CAA's and four tank armies. The Central and Southern FRONTS have a 3-to-1 mix. Numbered units for each FRONT are listed below:

Northern FRONT: Code Name KARTOSHA

10 CAA, 18 CAA
 7 GTA (Guards Tank Army), 11 GTA, 46 GTA, 51 GTA
 11 Tactical Air Army
 7 Airborne Division
 37 Artillery Division

Central FRONT: Code Name DOROGAYA MASHINA

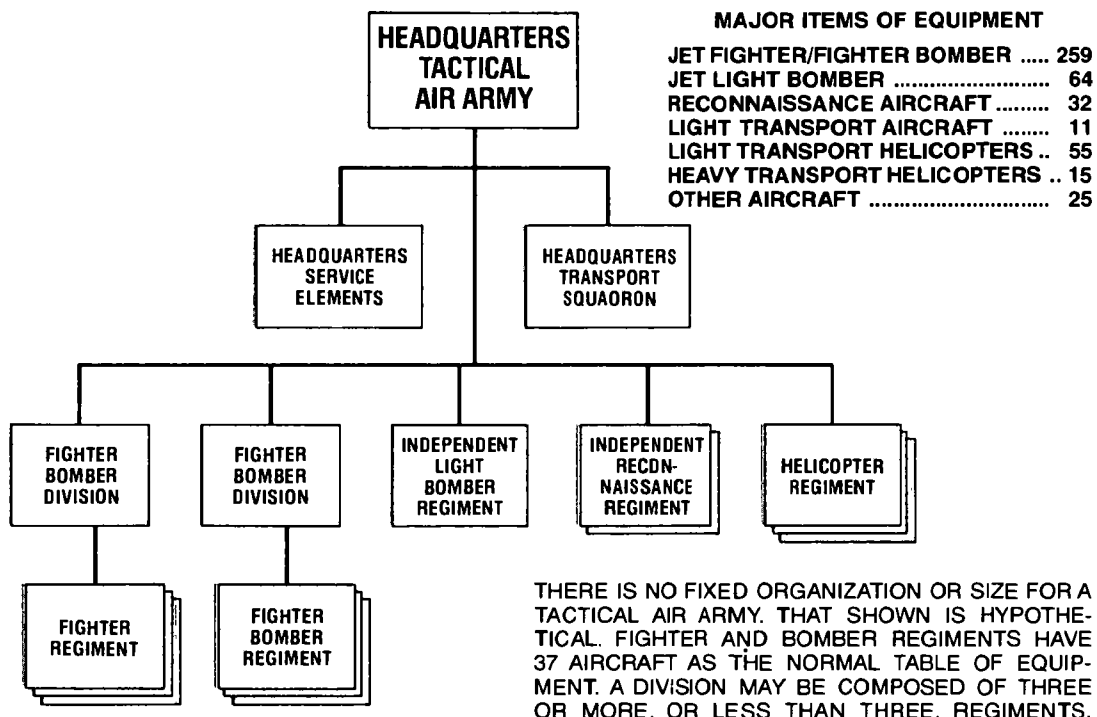
2 CAA, 14 CAA, 23 CAA
 20 TKA
 15 Tactical Air Army
 14 Airborne Division
 10 Artillery Division

Southern FRONT: Code Name MOCHALKA

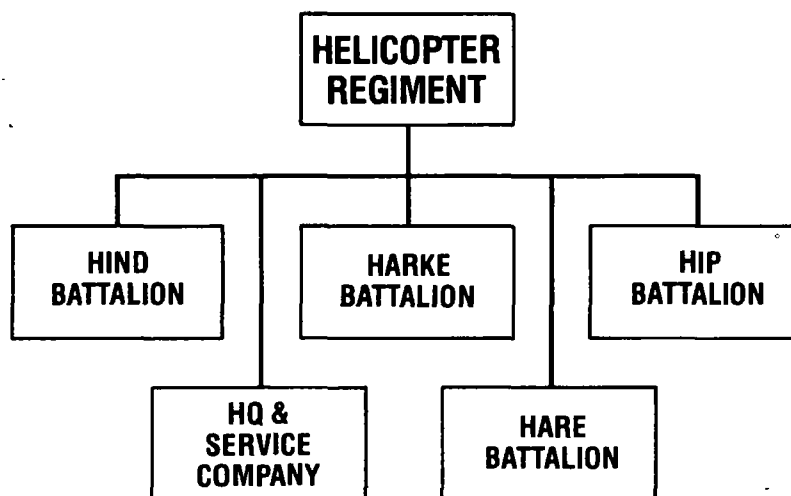
4 CAA, 12 CAA, 24 CAA
 8 GTA
 17 Tactical Air Army
 4 Airborne Division
 16 Artillery Division

The CAA and tank army are the principal maneuver elements in the FRONT. Chapters 11 and 12 discuss these in detail. The principal combat elements of the FRONT are:

TACTICAL AIR ARMY



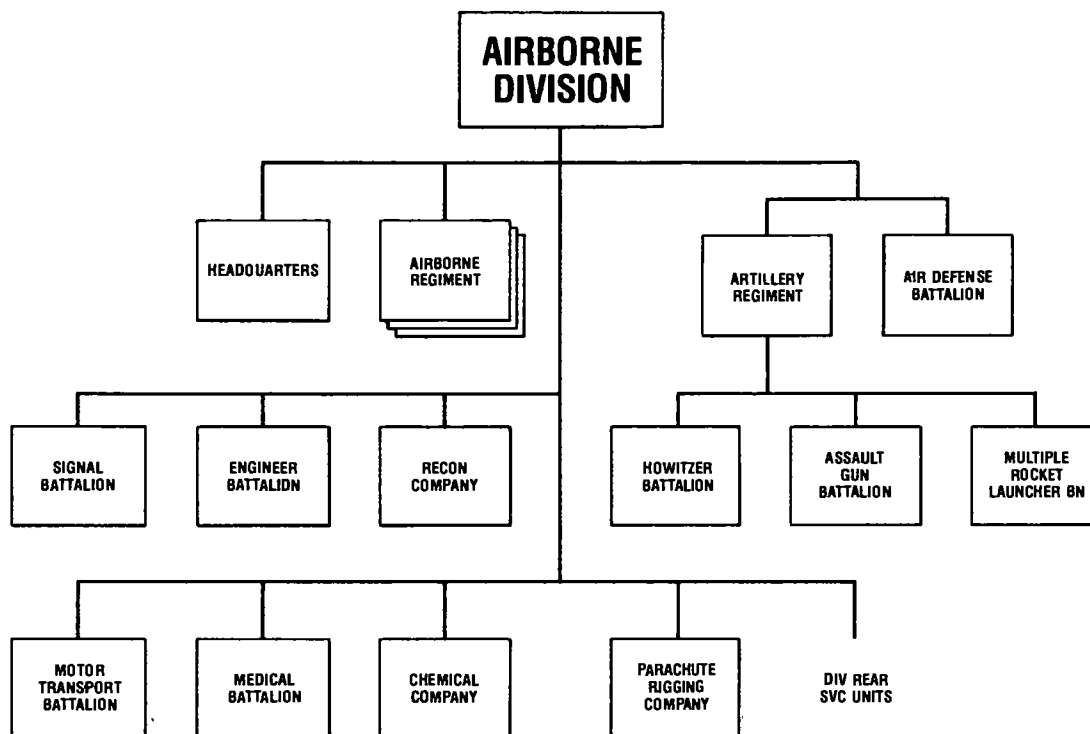
One tactical air army is usually organic to each FRONT. The tactical air army is subordinate to the front commander and is the largest tactical air unit in the opposing forces. *Air armies vary in organization, composition, and strength according to their missions.* An air army contains fighter bomber divisions, separate regiments, and service elements. A division is normally composed of three regiments. The triangular basis is also used below the air division, with three squadrons per regiment and three flights per squadron. Control of the air army is usually retained at FRONT but may be passed to the forward ground unit commander during exploitation and pursuit phases of an operation. Air divisions are designated fighter-bomber or ground-attack according to the type aircraft with which they are equipped. The air regiment is the basic tactical unit. It has fighter, bomber, fighter-bomber, and reconnaissance aircraft. Specific aircraft and their capabilities are found in section 5, chapter 14. In carrying out its close support mission, the tactical air army uses fixed- and rotary-wing aircraft to execute missions of reconnaissance, artillery observation, transport, communication, liaison, radio electronic warfare, and medical evacuation.



Helicopters are organized into regiments according to the type of helicopter employed. Their missions include the airlift of personnel during tactical operations and the transport of supplies and equipment. Some are equipped with anti-tank missile systems.

A typical air army has two or more reconnaissance regiments which provide tactical air reconnaissance in support of both air and ground operations. The mission of these regiments is to obtain tactical intelligence by visual, photographic, and electronic means. They are capable of providing sustained, near all-weather, day or night reconnaissance of routes, zones, and areas. Reconnaissance versions of the MIG-25 and -21 aircraft perform deep penetration missions and provide coverage near the main battle area for divisions and lower echelons. These aircraft have a photo capability, plus day/night multisensor capability, including side-looking airborne radar and infrared. Each reconnaissance regiment also has an imagery processing and interpretation battalion.

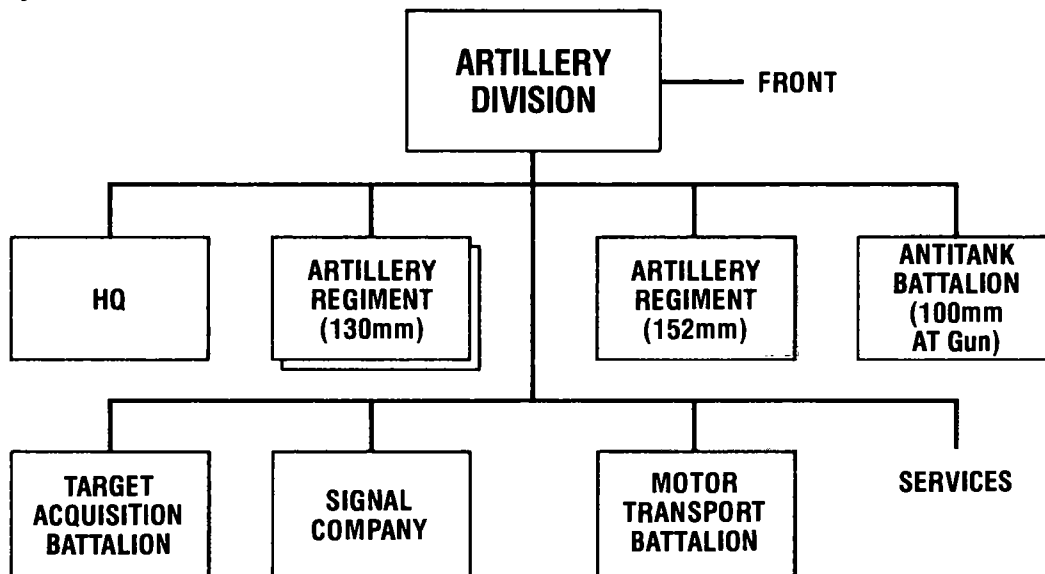
Airborne Division



	PERSONNEL			WEAPONS & EQUIPMENT																	
UNITS	OFFICER	ENLISTED	TOTAL	7.62mm LMG RPK/PK	23mm AA GUN ZU-23	57mm AT GUN (SP) ASU-57	85mm AT GUN (SP) ASU-85	ATGM VEH AT-23	ATGM MAN- PACK AT-3	73mm REEL GUN SPG-9	85mm ATGL RPG-7	82mm MORT M1937	122mm HOW D-30	140mm RL RPU- 14/WP-8	AFV BMD	AFV BDRM/-2	ARVT-54-T/	TRK	MTRCL	RADAR (Gnd Surv) GS-12	SA-7 GRAIL
HQ AND SVC ELM	101	527	628												2		2	230	5		
ABN REGT (3x)	555	5433	5988	243	18	27		27	27	81	270	54	18		321	63	18	495	27	1	105
DIV ARTY ELM	114	672	786		18		18						18	18	7	4	1	147			6
RECON CO	6	50	56								9				3	9		1	5		4
ENGR BN	28	270	298												13	6	1	28			2
SIG BN	21	178	199															40	3		
CML CO	5	48	53													5		17			2
TOTAL	830	7178	8008	243	36	27	18	27	27	81	279	54	36	18	346	87	22	958	40	1	119

The airborne division is similar to a motorized rifle division. Differences are that it has no large troop transporters (it has BMD's), no tanks or tank units, and lighter artillery; however, it does possess self-propelled assault guns of the 57mm and 85mm caliber. An airborne division has about 4,000 fewer men than a motorized rifle division. *Airborne divisions are special-purpose units whose employment is carefully controlled by the front commander.* Airborne operations are discussed in section 1, chapter 16.

Artillery Division

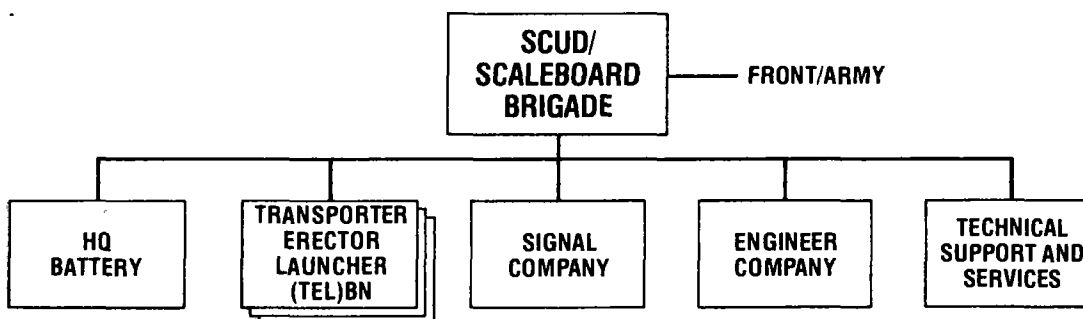


UNITS	PERSONNEL			WEAPONS & EQUIPMENT														
	OFFICER	ENLISTED	TOTAL	130mm GUN M-46	152mm GUN/ HOW D20	100mm AT GUN T-12	APC BTR BMP BRDM	ARTILLERY TRACTOR AT-P	ARTILLERY TRACTATS-59	TRUCKS	RADAR (CB)	RADAR (MET) END TRAY	RADAR (Gnd Surv) GS-13	SOUND RANG- ING SET	LASER RANG- ING SET			
DIV HQ	16	43	59				2			65								
130mm ARTY																		
REGT (2)	166	1600	1766	108					108	100								
152mm ARTY																		
REGT	83	800	883		54					125								
ANTITANK BN	23	259	282			18		18		50								
TGT ACQ BN	40	300	340							24	3	6	3	6	9			
MOTOR TRANS BN	25	350	375							202								
SIGNAL CO	5	57	62							15								
SERVICES	30	250	280							74								
TOTAL	388	3659	4047	108	54	18	2	18	108	655	3	6	3	6	9			

A minimum of one artillery division is usually allocated to each FRONT to provide fire support to armies making the main effort in advance or to assist in the defense of a critical area. Normally, regiments and battalions are attached forward to armies or to divisions. Observation aircraft are attached to the artillery division from the FRONT tactical air army during operations. The division is capable of coordinating all the fires of its subordinate units when needed to support one sector of operations. A type artillery division might have three artillery regiments, an antitank battalion, a motor transport battalion, and a target acquisition battalion. In some instances, heavy artillery brigades may be formed and assigned to the FRONT in addition to the artillery division. Conventional artillery operations are listed in section 3, chapter 14. Nuclear operations are detailed in section 7, chapter 14.

Surface-to-Surface SCUD and SCALEBOARD Brigades

The brigades, together with their subordinate battalions, are administrative organizations through which the FRONT commander exercises control over the firing units. The missile battalions are tactical firing units capable of independent operations. They are used in a general fire support role for FRONT operations. Battalions may be specifically employed in support of an army operation, in which case they come under the control of the army commander. Each brigade has three battalions and each battalion has three TEL's (one in each firing battery). Total number of missiles in each battalion in unknown.



UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	TEL SCUD/SCALEBOARD	CRANE	TRK	DOZER BAT	DITCHING MACH MDK-2	RADAR (MET) END TRAY										
HQ BTRY	20	125	145			75													
LAUNCHER BN (3)	129	675	804	9		33													
SIGNAL CO	7	70	77			20													
ENGINEER CO	7	78	85		15	26	15	5											
TECH SPT AND SVC	15	135	150			47			3										
TOTAL	178	1083	1261	9	15	201	15	5	3										

Organization charts for the rest of the combat support and service units of the FRONT may be found in appendix A.

Section 2—The Offense

General

The aim of a FRONT offensive is to break through main defenses and launch attacks into US rear areas destroying remaining US defenses by attacks from the flank and rear. The advance is at a rate of 60 to 100 kilometers per day in a nuclear campaign and 30 to 50 kilometers per day in conventional operations. A FRONT may attack with all its armies in the first echelon, retaining a few divisions in reserve. If US defenses are not in great strength or depth, opposing forces tank armies attempt to reach main objectives at great speed while the CAA's follow in the second echelon. If conditions are unsuited to tank assault, the CAA's will then be the first echelon with tanks following, prepared for the breakthrough and exploitation. The size of the sector and depth of the objectives allocated to a FRONT will vary considerably depending on its strength, role, the terrain, and whether or not the campaign is nuclear.

In a large-scale offense opposing forces usually attack at a number of points on a broad front with heavy concentration of artillery, tanks, airpower, and nuclear fires at decisive points. Normally, they seek a double envelopment to surround and destroy the US force. If the US flanks are not assailable or cannot be bypassed, the pincer maneuver may be used. Mobility, fluid tactics, maintenance of the attack, and close contact with the US force are emphasized. Every opportunity to envelop the US force and to attack it from the rear is exploited to surround and subsequently destroy it.

Phasing of Major Offenses

Major offenses normally consist of three phases:

- The first phase consists of the breakthrough, encirclement, and destruction of US forces in contact to include about 3 to 5 days out to a depth of approximately 250 to 280 kilometers.
- The second phase is the exploitation which includes the destruction of US strategic reserves by tank and combined arms armies. This phase lasts about 4 to 8 additional days and carries the advance approximately 250 to 280 kilometers farther.
- The third phase is pursuit of US remnants and the securing of the FRONT objective by all armies spearheaded by the tank army. It may also consist of a deep pursuit into the US logistical base and could involve an advance of an additional 500 kilometers in 8 days.

The phasing of the offensive is flexible and depends on factors such as the nature of US defenses, the terrain, and the road net. An average rate of advance of 85 kilometers per day is planned. Under conditions of nonnuclear warfare, the general phasing of a large-scale offensive remains unchanged except that the average rate of advance will be about 50 kilometers per day.

Planning for the Offense

Major offensives are conducted by FRONT's. The first stage of the offensive are planned in full detail. Subsequent stages are in outline form only. A FRONT can prepare for a major offensive in several days when utilizing all its combat assets. If only one army is involved, several hours are required to mount the attack.

Tactical cover and deception plans and detailed security measures are integral parts of the offensive planning. The following security measures are rigidly enforced.

- Limited dissemination of requirements and planning for the offense.
- Ground reconnaissance into US areas is limited to units already in contact. Reconnaissance by large advance parties is prohibited.
- Normal radio traffic patterns and volume are maintained. Opening of new radio nets is prohibited.
- Normal patterns and scale of weapon fires, air activities, and logistical activities are maintained.
- Maximum use is made of liaison officers for transmitting orders and plans.
- Newly arrived units, redistribution of forces, engineer construction, and movement of supplies required for the offense are carefully concealed.
- Troop movement is conducted at night or during periods of reduced visibility.

Maximum effort is made to conceal all preparations for the attack. Camouflage discipline is strictly enforced. Ground reconnaissance before the attack is deep and extensive. As a security and deception measure, intensive ground and air reconnaissance is carried out along the entire line of contact and not just in areas of the main efforts. This reconnaissance is carried out by division, regiment, and battalion motorized rifle and reconnaissance elements of the units in contact. Reconnaissance seeks to obtain a complete and continuous picture of US capabilities and vulnerabilities and of the terrain under US control. Ground reconnaissance is supplemented by all available intelligence information collection means. Reconnaissance is tightly controlled so that plans for the offense are not revealed.

Frontages and Depths

A typical FRONT zone of action usually is about 200 kilometers wide and 180 kilometers deep, exclusive of the area for combat support units and installations. Under nonactive nuclear conditions, the width of the FRONT zone remains unchanged; however, additional combat power (divisions) may be employed. Regardless of the environment, frontages for FRONT normally are based on the number of divisions available for the operation.

The total width of the FRONT area of main effort is about 40 to 50 kilometers and normally does not exceed one-third of the total width of the entire FRONT zone. The FRONT main efforts may be made at different parts of the FRONT zone. Usually not more than two main efforts are made.

The depth of the FRONT attack formation depends on the terrain, weather,

and available assembly areas. The ability of the US force to conduct spoiling attacks and interfere with opposing forces movement is also considered. Usually the depth of the FRONT first-echelon formation extends to about 100 kilometers behind the line of contact. The second-echelon armies are located in assembly areas and on routes of advance about 100 to 130 kilometers behind the line of contact to permit prompt commitment and still achieve dispersion in depth. Reserves may be located 30 to 180 kilometers in the rear of the forces in contact.

Formations

The number of echelons used in the attack formation depends on the mission, means available, terrain, and the strength of US defenses. The greater the depth of the US defense, the more echelons in the formation. Normally a two-echelon formation is used. If the attack is not supported by nuclear weapons, a three-echelon formation may be used, particularly if the area of operations is very narrow and the US force is very strong. A one-echelon formation is seldom used and then only against a weak US force as in a secondary or holding attack.

The composition of each echelon depends on the nature of the US defenses, the terrain, and the availability of nuclear fires.

- In an offense against a relatively strong US force, in terrain not permitting use of large masses of tanks, or when available nuclear fires are limited, a typical FRONT will usually use the following formation:

First echelon: two CAA's.

Second echelon: one CAA and the tank army with those forces not employed in the second echelon being deployed in the third echelon.

- In an offense against a relatively weak US force or where terrain permits use of large masses of tanks and adequate nuclear fires are available, the FRONT normally will use the following formation:

First echelon: one or two CAA's and one tank army.

Second echelon: one to two CAA's.

- In offenses where none of these factors is predominant, the front attacks with two CAA's in the first echelon and a CAA and the tank army in the second echelon.

The advance to contact is made on a broad front in parallel columns with each CAA advancing in its assigned zone of action.

Concentration for the Offense

Units in the first echelon of the offense and not already in contact are concentrated at night several days prior to the offensive in assembly areas 60 to 75 kilometers from the line of contact. The leading elements of first-echelon armies move, 3 to 4 days prior to the offensive, to forward assembly areas 20 to 30 kilometers from the line of contact. At the last possible time, usually the night preceding the start of the offensive, these units move to attack positions 3 to 10

kilometers from the line of contact. The movement to the attack positions, made in either regimental or battalion columns, is timed to reach these positions just prior to firing the artillery preparation.

Second-echelon units normally move forward into assembly areas vacated by the first-echelon units.

Tank and motorized units move from assembly areas to attack positions during the preparatory fires so that the noise of their movement is masked.

Artillery units move at the last possible hour that will permit them to be in position to support the attack at least 24 hours prior to the launching of the offensive.

The location of assembly areas depends on terrain, type of operation, time, and other related factors. They are located away from cities and usually are large enough to permit 2 kilometers between battalion-sized forces. Movement to assembly areas and to attack positions is made by vehicle and conducted in the same manner as the advance to contact.

Tactical Employment

The FRONT normally attacks in two echelons with the tank army as the exploitation force. The first echelon is expected to break through the US positions and envelop the US forward defenses. It attempts to create a gap about 20 kilometers wide and 40 kilometers deep to permit the employment of the tank army as early as possible. The first echelon will then complete the destruction of encircled US forces, consolidate overrun areas, and initiate pursuit of US remnants. The second echelon is committed to support and reinforce the first-echelon armies, to outflank US defenses, and to protect flanks against US counterattacks.

First Echelon

The first echelon of the FRONT is expected to advance to a depth of 70 to 100 kilometers in the first 24 to 48 hours of the offense and destroy US tactical defenses and corps reserves. Opposing forces perceive this to be the most critical stage of the offense, as a secure penetration for the deployment of the exploitation force (the tank army) is the key to rapidly disintegrating organized US resistance to the offense.

Exploitation Force

The tank army is normally the FRONT's exploitation force. It is committed as early as possible after the start of the offense. A minimum gap of about 20 kilometers in width and 40 kilometers in depth is required for the commitment of the tank army. Once the breakthrough area is passed, the tank army will fan out in columns of divisions in a zone up to 50 kilometers in width. The tank army will maintain rapid and uninterrupted movement toward the FRONT objective, bypassing any resistance that cannot be overcome. The tank army normally will not assist in the destruction of encircled forces, but will protect the CAA's from US forces advancing to the relief of the encircled US forces. At the first sign of US withdrawal, the tank army will start pursuit operations.

Second-Echelon

Prior to the start of the attack, the second echelon normally is held in large assembly areas 100 to 130 kilometers behind the line of contact. It is moved up into concentration areas as they are vacated by the first echelon. The second echelon usually is committed after the FRONT has committed its tank army; its area of commitment normally is on the flank of the first-echelon elements of the tank army. The commitment of the second echelon is carefully coordinated by the FRONT to preclude lucrative nuclear targets for the enemy. Once committed, the second echelon may rapidly deploy to an attack zone of about 40 kilometers wide.

Preparatory Fires

The initial preparation is coordinated and controlled by armies in the first echelon of the FRONT. Nuclear preparatory fires on relatively close-in targets normally are made immediately before the nonnuclear artillery and air preparation and usually last about 20 minutes. This permits sufficient time for post-strike damage assessment and return of close support aviation to the area, but does not allow the US force enough time to recover from the effects of the nuclear fires. Preparatory fires are so intensive that they are often referred to as the "artillery offensive." The preparation is intended to silence the bulk of the US force's supporting fires and neutralize US forces in immediate contact. The exact duration of the preparation depends on the extent and type of areas to be neutralized, available air and artillery support, and ammunition resources. When nuclear fires are not employed in the preparation, the nonnuclear artillery and air preparation is longer, varying from 30 minutes to 1 hour or more.

A short, heavy preparation, including nuclear fires and air support, usually precedes the commitment of the second echelon. This preparation is fired by the organic and attached artillery of the army reinforced by some of the artillery of the first echelon. At times, nuclear fires alone may constitute this preparation.

Artillery

Organic FRONT artillery together with attached artillery is divided so that the greater portion will support the first-echelon armies and division, and further divided for allocation to the main attack and secondary attack. Allocations are made so as to give the forces in the main attack sector an overwhelming preponderance of artillery support.

When the second-echelon CAA and/or tank army is committed, some artillery support is shifted from first-echelon support roles so that the newly committed forces may receive an artillery support allocation commensurate with the degree of resistance they are expected to encounter and the mission they have been assigned. For schematic of large-scale offensive operations see page 13-13.

Section 3—The Defense

Conduct of the Defense

The defense is based on the motorized rifle divisions of the CAA's in the main defensive belt. The US force is canalized and kept under continuous fire and close combat. At a point decided by the FRONT commander, massive counterattacks are launched to destroy US penetration within the defensive belts and to enable the FRONT to go over to the offense.

Counterattacks are the backbone of the defense and are planned in advance for second echelons and reserves. The counterattacks usually are preceded by short, heavy nuclear and/or conventional artillery preparation and supported by fires from adjacent units. Counterattacks are made by a sudden thrust on the advancing US force's flanks and rear before it has had sufficient time to consolidate captured positions. Counterattacks involve progressively larger units and are delivered with more frequency as the depth of the US offensive salient increases.

Organization for the Defense

The FRONT normally establishes the general location of the forward edge of the main defensive belt and the boundaries of the armies' zones of defense.

The frontage and depth of a FRONT defense can be up to 400 kilometers wide and 400 kilometers deep. The defense is organized in successive belts designed to provide sufficient depth to absorb and exhaust the attacking US force. As a minimum, the defense zone will have a security zone, a main defense belt, a second defense belt, and a third defense belt plus reserves.

- The security zone is established and manned by the first-echelon armies, usually about 20 to 30 kilometers deep. Units are dispersed as widely as their mission permits in anticipation of heavy nuclear strikes against them.
- The FRONT first echelon of the main defense belt generally will have two or three CAA's. The second echelon of the main defense belt normally consists of a tank army, reserve units, and possibly a CAA. The tank army is normally used as a counterattack force.
- The second defense belt is manned by each army's second-echelon divisions, including tank divisions, after they have completed their mission in the security zone. It contains each army's main and alternate command posts and portions of their reserves.
- The third defense belt contains the FRONT second-echelon forces and some FRONT reserves. The third defense belt plans and conducts the counterattack. FRONT counteroffensives are launched from this belt.

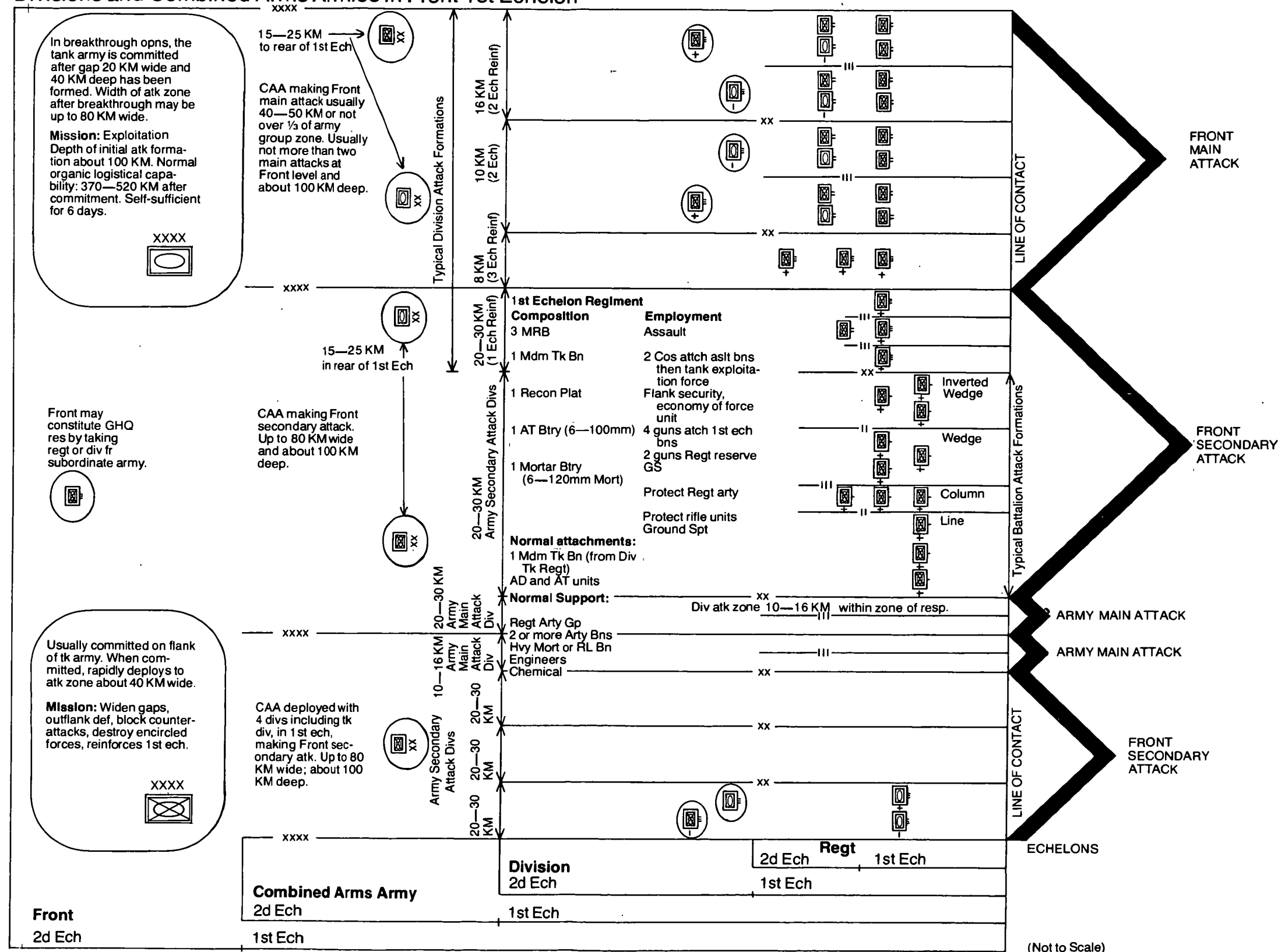
A schematic representation of opposing forces large-scale defense operations is shown on page 13-14.

OPFOR Large-Scale Offensive Operations

Indicating Usual Frontages, Depths and Typical Composition of Major Elements. Applicable To Nuclear and Nonnuclear Prepared Warfare.

Note: Actual Composition and Areas of Responsibility Will Vary with the Enemy and Terrain.

Divisions and Combined Arms Armies in Front 1st Echelon



Front Typically Deployed

	Frontages		Depths	Echelons		Reserves	Notes
	Main attack	Secondary atk		1st	2d		
FRONT	See Notes		About 180 KM	Two CAA	One CAA One Tk A	30—180 KM in rear of forces in contact, FRONT may constitute a reserve by taking a rifle Regt or Div from a subordinate army.	Typical Front zone of action is about 200 KM wide and about 180 KM deep exclusive of area for service support units.
CAA	About 30 KM	Up to 80 KM	About 100 KM	Two MRD	One MRD one or two TD	MRR or separate MR or Tk units made available by FRONT	
Div	10—16 KM	20—30 KM	30—35 KM	Two reinf MRR	One reinf MRR	Medium Tank Regt considered div tk res or exploitation force. The Tk Div res can be committed before, with, or after the 2d ech to exploit gaps. If the Tk Regt reinf 1st ech, it normally regains control of detached Bns when committed.	Medium Tank Regt used to reinforce 1st ech regt, with one bn each and remainder of regt considered as div tk reserve.
Regt	5—8 KM	10—15 KM	15 KM	Two reinf MRB	One MRB (follows 1st ech by 3—6 KM & is usually committed for march).	The Tk Bn is the cmdrs Tk res and is committed to exploit penetrations.	
Bn	1—1.5 KM	1.7—2.3 KM	Up to 3 KM	Two reinf MRC	One MRC (may be reinf; normally follows about 800m behind 1st ech).	Depending on width of sector, one MRP may be held as res. Tk res not usually held at battalion.	

Phasing of Major Offensive

Phase	Objective	Time	Distance
1	Breakthrough, encirclement, and destruction of forces in contact including corps reserve	3—5 days	250—280 KM
2	Destruction of strategic reserve	4—8 days	250—280 KM
3	Pursuit and securing of army group objective	Up to 8 days	Could involve 500 KM

Front Formations

Typical FRONT
3 CAA and 1 TK A

Tactical Formations Varying Situations	Armies in	
	1st Ech	2d Ech
Strong Enemy	2 CAA	1 CAA
Poor tank terrain		1 Tk A
Limited nuclear wpns		
No significant factors	2 CAA	1 CAA 1 Tk A
Weak enemy	1 or 2 CAA	1 or 2 CAA
Good tank terrain		
Adequate nuc wpns	1 Tk A	

General

Offensive takes the general form of deep tank thrusts.

MTR R&L and tank forces are organized in echelons to break through the forward enemy defenses and push deep into the enemy rear.

Normally, two echelons are used, the 1st to make the breakthrough, encircle and destroy enemy forces and create a gap for commitment of the 2d echelon. The tank army is the exploitation force and passes through the gap.

OPFOR assembly areas depend on the terrain, type of operation, time and other related factors. Areas are usually large enough to permit 2 KM between battalion size units.

Missions

Front: Capture objectives that may be more than 550 KM away and, if the situation permits, continue the advance an additional 500 KM.

Combined Arms Army: Destroy enemy resistance to the front and to create gaps large enough to permit employment of large mobile forces of the army group. Continue operations against deep enemy reserves and destruction of encircled enemy forces.

Division: Break through defenses, destroy cohesive defense, divide into small isolated groups, destroy each in turn, and overrun division artillery. Expected to advance to a depth of 70—100 KM in first 24—48 hours.

Regiment: Break through the enemy forward defenses, continue attack against division reserves.

Concentration for the Offensive

General
Units not in contact concentrate 60—75 KM back of LOC.

1st Echelon
1st echelon divisions move to assembly area 20—30 KM from LOC.

Move by battalion and regiment columns preceded by AT units, to attack positions or assembly areas 3—10 KM from LOC during night.

Arrive in attack position just prior to firing of preparation.

Tank regiment move from assembly area after start of preparation.

2d Echelon
Move from concentration areas to assembly areas vacated by 1st echelon.

Tank and self propelled units move during preparation.

Artillery units will not move until last possible hour, which will permit them to be in position 24 hours before attack.

Chapter 14

COMBAT SUPPORT OPERATIONS

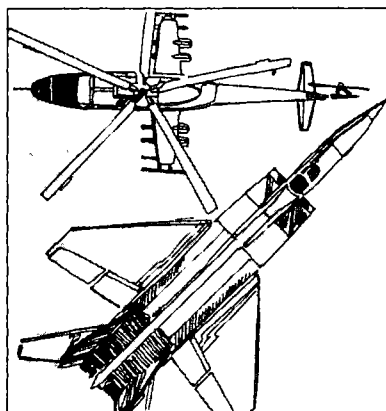


TABLE OF CONTENTS

Section 1

Reconnaissance	14-1
General	14-1
Reconnaissance	
Means	14-1
Divisional and	
Regimental	
Reconnaissance ..	14-3
Reconnaissance	
Battalion	14-3
Reconnaissance	
Groups	14-4
Reconnaissance	
Detachment	14-4
Reconnaissance	
Patrol	14-4

Section 2

Signals Intelligence and	
Radioelectronic Combat ...	14-4
Signals	
Intelligence	14-4
Radioelectronic	
Combat	14-5

Section 3

Conventional Artillery	
and Antitank Operations ...	14-8
General	14-8
Artillery	
Conventional	
Weapon	
Systems	14-8
Allocation of	
Artillery	14-9
Operations	14-9
Accompanying	
Artillery	14-10
Artillery	
Disposition	14-10
Defensive Fire	
Planning	14-12

Section 1—Reconnaissance

General

Opposing forces use the same word to signify both “intelligence” and “reconnaissance,” showing their close interrelation. Opposing forces doctrine divides military intelligence into three basic types: strategic, operational, and tactical.

- Strategic Intelligence is collected to insure the safety of the opposing forces homeland and to provide information in preparing action for and conducting strategic military operations.
- Operational Intelligence is concerned with the application of the theories and practices in preparing for and conducting current operations, independent and joint, of army elements.
- *Tactical Intelligence is considered the most important category of military intelligence for insuring the success of combat operations at the tactical unit level (division and lower).* It is conducted to obtain information concerning US forces, terrain, weather, and other information necessary to prepare for and conduct ground, sea, and air combat operations.

Reconnaissance Means

The primary opposing forces means of reconnaissance are air, electronic intercept and direction finding, sabotage and reconnaissance teams, motorized reconnaissance, and artillery observation. Apart from these, the opposing forces stress that reconnaissance is everyone's responsibility. *It is the duty of all opposing forces troops to search actively for intelligence information and forward it to higher headquarters.*

Air reconnaissance is currently one of the main sources of tactical intelligence. The opposing forces reconnaissance aircraft are described in section 5 of this chapter.

Antitank Operations	14-12	Close Air Support ...	14-26	Chemical Units	14-36
Antitank Equipment	14-12	Techniques of Close Air Support	14-26	Biological Operations	14-39
Antitank Battalion, Motorized Rifle Division	14-13	Section 6		Reconnaissance ...	14-39
Tactics	14-14	Helicopter/Air Assault Operations	14-28	Flame Operations ...	14-40
Antitank Guided Missile Battery, Motorized Rifle Regiments	14-15	General	14-28	Smoke Operations	14-40
Phases	14-16	Organization	14-28	Section 9	
Ground Forces Air Defense Operations	14-17	Equipment	14-28	Engineer Support	14-41
General	14-17	Fire Support Operations	14-30	General	14-41
Air Defense Doctrine	14-17	Airmobile Operations	14-30	Support in Offensive Operations	14-41
Air Defense Planning	14-17	Section 7		Support in Defensive Operations	14-41
Antiaircraft Artillery Regiment, Tank and Motorized Rifle Divisions	14-18	Nuclear Operations	14-31	Assault River Crossing	14-43
General	14-19	General	14-31	Ferries	14-43
Regimental Antiaircraft Battery	14-19	Nuclear Weapons ...	14-31	Mine Warfare	14-44
Battalion Air Defense	14-20	Nuclear Weapons Employment	14-31	Section 10	
Tactical Air Support Operations	14-21	Principles of Offensive Nuclear Operations	14-32	Tactical Communications ..	14-46
General	14-21	Principles of Defensive Nuclear Operations	14-32	General	14-46
Organization	14-21	Divisional Free Rocket Over Ground (FROG) Battalion	14-33	Organization	14-46
Concept of Air Support	14-21	Surface-to-Surface Missile SCUD Brigade	14-33	Principles of Communications ..	14-46
Tactical Air Reconnaissance ..	14-21	Surface-to-Surface Missile SCALEBOARD Brigade	14-34	Communications Equipment	14-47
Reconnaissance Aircraft	14-22	Section 8		Types of Radio Nets	14-48
Tactical Support Aircraft	14-22	Chemical, Biological, Flame, and Smoke Operations	14-35	Tactical Communication Doctrine	14-48
Air Support of Offensive Operations	14-25	Control of Chemical and Biological Weapons	14-35	Communications Security	14-49
Air Support in the Defense	14-25	Employment of Chemical Agents ..	14-35	Section 11	
Air Support of Retrograde Operations	14-26	Offensive Use of Chemical Weapons	14-35	Tactical Command and Control	14-49
		Defensive Use of Chemical Weapons	14-36	Organization of Headquarters	14-49
				Formation Commanders	14-50
				Location and Movement of Headquarters	14-50
				Orders and Instructions	14-51
				Future Trends	14-51

Electronic intercept and direction finding facilities exist at FRONT, army, and division, and are discussed further in section 2 of this chapter.

Sabotage and reconnaissance teams are located in FRONT, army, and divisional reconnaissance units. The teams position themselves up to 350 kilometers inside US held territory at a density of about one team to 30- to 40-square kilometers. A team is usually tasked with locating and sometimes destroying either a nuclear weapon site or a headquarters.

Motorized reconnaissance is provided by the divisional reconnaissance battalion and regimental reconnaissance company.

Artillery observation, including field radars, exists at FRONT, army, and divisional levels and consists of:

- Tracked self-propelled surveillance and weapon-locating radars.
- Radar intercept/direction finding sets.
- Sound-ranging microphones.
- Flash-spotting observation posts.

Divisional and Regimental Reconnaissance

Motorized rifle and tank divisions and regiments have specialist reconnaissance units including a separate reconnaissance battalion at divisional level. There are also specialist reconnaissance elements of engineer, artillery, and chemical troops. All reconnaissance vehicles are fitted with night-vision devices.

The specialist reconnaissance units are equipped with light amphibious PT-76 tanks and amphibious BRDM/BRDM-2 scout cars and motorcycle combinations mounting machineguns. These units may operate up to 1 day's march ahead of the main body.

The motorized rifle division will often allocate a motorized rifle company, with specialist reconnaissance elements attached, in the purely reconnaissance role to reinforce divisional reconnaissance. This company group will operate boldly up to a half day's march ahead of the main body and will try to bypass opposition. Advance guard battalions also deploy a reconnaissance patrol of about platoon strength up to 5 kilometers ahead of the main body.

Reconnaissance Battalion

The reconnaissance battalion is not usually used as an advance detachment or for security. Its primary mission is to provide a reconnaissance force forward of the main division elements in the defense.

Long-range reconnaissance patrols (LRRP's) from the long-range reconnaissance company are normally sent forward to observe probable enemy concentration areas and are also sent out to the flanks and into the gaps of the US combat formations. The LRRP's may operate up to 50 kilometers forward of the FEBA. One of their primary missions is to spot US nuclear weapons, and they may also be given the mission to disrupt US communications by destroying bridges,

cutting wires, and sabotaging installations. In this role they may operate up to 100 kilometers forward of the line of contact.

Reconnaissance Groups

Reconnaissance groups are temporary tactical subunits formed for temporary missions. They are usually reinforced platoons or companies. These groups find their broadest application on the march, during a meeting engagement, and in the defense. In an attack situation a division would normally form a reconnaissance group consisting of a motorized rifle company, reinforced with a platoon of tanks and engineer and radiation-chemical reconnaissance squads. A division reconnaissance group is assigned an axis of advance and an objective. The distance separating a reconnaissance group or detachment from main combat forces is determined by the task and depends upon the nature of the combat operations, the composition of the reconnaissance element, and the nature of the terrain. The normal depth of reconnaissance responsibility is 20 kilometers for the regiment and 50 kilometers for the division.

Reconnaissance Detachment

A separate reconnaissance patrol is a temporary tactical subunit of reinforced company or battalion strength. If the basic unit is a motorized rifle or tank battalion, the detachment will normally be reinforced with elements of the other arm to make it a balanced combat force. An operational reconnaissance detachment in battalion strength is assigned a zone approximately 7 kilometers wide and 35 kilometers deep, or it may be assigned an axis of advance. When assigned such an axis, its operational depth is the same as that for a reconnaissance group. A reconnaissance detachment fulfills its mission by observation, ambush, and if necessary direct attack.

Reconnaissance Patrol

A separate reconnaissance patrol is a temporary tactical subunit composed of a reinforced squad or platoon. It is usually assigned a specific objective and/or route instead of a zone. A squad-sized patrol may operate away from its parent unit at a distance of 8 kilometers during the day and 3 kilometers at night, while a platoon-sized patrol may operate at a distance of up to 15 kilometers during the day and up to 5 kilometers at night. A separate reconnaissance patrol accomplishes its mission by means of observation and maneuver, but may engage in limited combat, if necessary. The patrol is also used to capture prisoners for intelligence exploitation.

Section 2—Signals Intelligence and Radioelectronic Combat

Signals Intelligence

Signals intelligence (SIGINT) is a term which includes communications intelligence (COMINT), i.e., information gathered from communications electromagnetic emissions; electronic intelligence (ELINT), i.e., information derived from intercepting electromagnetic energy radiated by noncommunications

emitters, and telemetry intelligence (TELINT), which is primarily strategic in nature and therefore will not be mentioned further in this manual. SIGINT is very useful at division level for targeting and early-warning purposes, and is generally of more interest to the intelligence and operations officer than to the order of battle (OB) section. SIGINT can be useful for focusing intelligence collection resources for targeting purposes, and may be useful to OB for pattern analysis, particularly where troops are not in contact.

The opposing forces consider SIGINT as a primary source of intelligence. Through pattern analysis, traffic analysis, and message content, the opposing forces can develop SIGINT concerning the US force's composition, structure, capabilities, and intentions. Data developed through SIGINT are also used in the employment of jamming and deception operations. These operations, part of radioelectronic combat (REC), will be discussed later in this section. SIGINT collection efforts give priority to tactical operations, logistics, and administrative communication nets in support of combat operations. Employment concepts require that maximum efforts be made to provide the supported commanders with real-time SIGINT information, thereby enhancing reaction time and value of the information received.

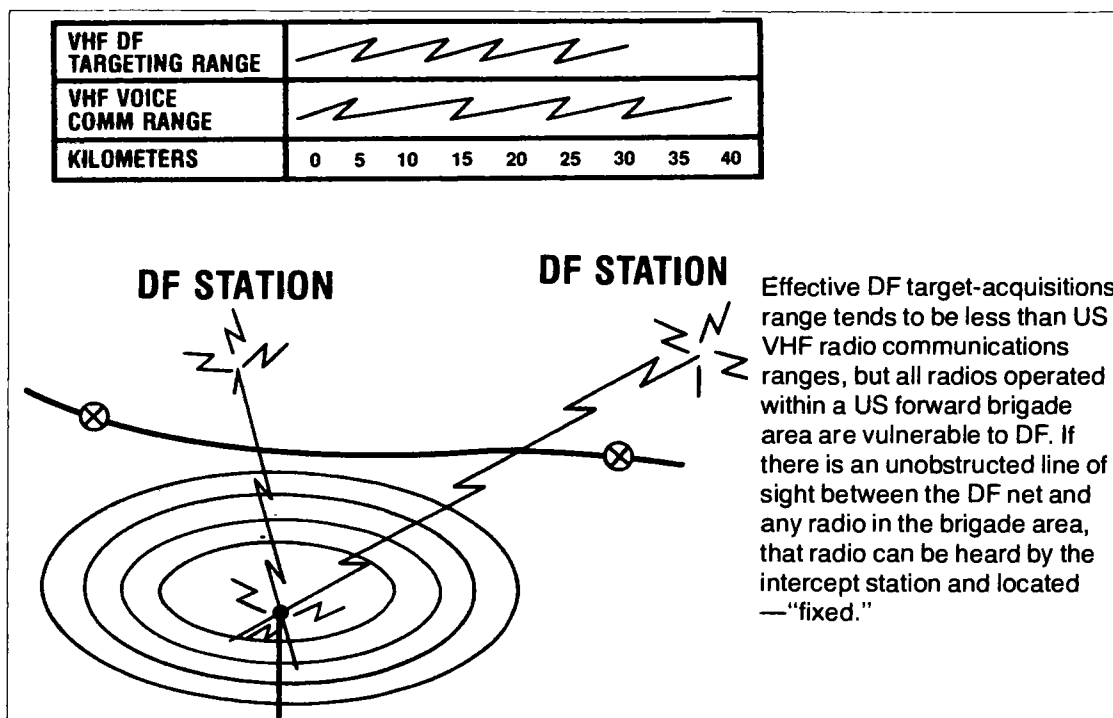
Radioelectronic Combat

Importance. *Opposing forces doctrine stresses that REC is a weapons system and as such must be integrated with other weapons systems in the combat scheme of operations. Opposing forces give high priority to disruption of command, control, and communications and the identification and location of combat elements.*

Resources. REC operations are conducted to disrupt or degrade US use of the electromagnetic spectrum while protecting organic communications-electronics (C-E) equipment from US EW. The opposing forces are capable of locating, identifying, and rapidly exploiting all types of communication and noncommunications receivers over a wide range of frequencies. Special purpose REC units are at FRONT and army levels, and there are organic REC elements at division. Artillery units have target acquisition elements. Additionally, REC units can employ a variety of jammers. Below army level, commanders use their organic assets to conduct REC operations when special-purpose units have not been attached from higher levels and when approval for such operations is obtained. Because of the sensitivity of such operations, control is tightly maintained at front level.

Intercept. The signal intercept capability of the opposing forces covers a broad range of frequencies. Signal intercept operations are conducted to gain intelligence information for tactical operations, to gain information concerning the technical characteristics of US equipment and operating procedures, to form a data base to conduct operations, and to identify new emitters introduced on the battlefield.

Direction Finding (DF). The majority of opposing forces tactical (DF) and intercept equipment is mobile and transportable. Aircraft in the tactical air army (TAA), as well as support aircraft from higher echelons, are equipped for the conduct of DF and intercept operations.



Priorities. *The opposing forces often fire on a DF fix only. Once a transmitter is located through DF efforts, artillery fires a barrage to cover a wide area at the suspected transmitter location.* The opposing forces consider the possibility of a US deception operation but feel that the possible gain is worth the expense of ordnance. Priorities for employing countermeasures are destruction, deception, and jamming.

Electronic Countermeasures. ECM operations (jamming and deception) selectively disrupt, harass, and deceive communication and electronic systems with the overall aim of degrading or denying their utility. ECM is a complementary combat support means to firepower and maneuver. ECM operations are usually directed at communication nets where signals are weak, where there is natural background interference, or some atmospheric disturbance, or where large communications nets are operating and an atmosphere of confusion exists.

Jamming. The opposing forces have the capability to jam radio nets by means of spot (one frequency), sweep, or barrage (band frequencies) jamming and will do so when it is more desirable to jam than to obtain information from those nets. Chaff and rope are delivered by artillery fire or dropped from aircraft, and jamming is conducted against other noncommunication devices.

Deception. The opposing forces possess a significant capability to conduct electronic deception operations against radio communication circuits and electromagnetic radiations emanating from noncommunication emitters. On occasion US radio nets are entered to deceive the operators or cause unnecessary deployments of tactical units. Deception operations are also directed against US radars and missile guidance systems by using chaff and other reflective devices to represent fictitious targets.

Electronic Warfare Support Measures (ESM). Collection activities are conducted to enhance the operational effectiveness of ECM. US SIGINT units, as a corollary to their mission of collecting tactical intelligence information about the opposition through signal intercept operations, are also tasked with collection activities directed at both intentional and accidental C-E emissions. During search and monitor operations, SIGINT personnel are charged with locating, recording, and analyzing the technical characteristics of the signals they intercept, as well as specific operating procedures employed in the victim nets, to exploit such radiations. Such items as type of equipment, frequency range, type of modulation, primary and alternate frequencies, operating schedules, and patterns are all pieces of information necessary to launch an ECM operation. Radar intercept operations are also geared to the collection of technical information concerning hostile surveillance systems, to include pulse repetition time, pulse width, radar deployment, area of surveillance, frequency change capability, and operating power. Both ground-based and airborne DF equipment are used to locate US C-E transmitters. ESM collection activities can determine the capabilities and vulnerabilities of the US systems, leading to estimates of the potential effectiveness of ECM operations.

Electronic Counter-countermeasures (ECCM). Opposing forces ECCM doctrine relies on the exacting training given communication and electronic emitter operators to prevent/minimize hostile deception and jamming. Basic means used to prevent disruption operations include the proper siting of antennas and radars behind radiation barriers, controlling the radar's scan sector to minimize radiations into US territory, the use of dummy loads for testing and maintenance, random scheduling of C-E operations, and insistence on short radio transmissions using the lowest power possible.

Offensive Operations. *The opposing forces use all means available to support offensive actions.* Prior to such operations, opposing forces will use REC assets to determine the composition of the US force, obtain electronic OB, and gain electronic information regarding the parameters of electronic emitters to plan for the use of ECM. REC is employed to support deception operations, find weak areas in the US defense, and confuse the US force as to the place of the main and supporting attacks. The opposing forces support their maneuvering units and protect their troops by the integration and coordination of the jamming of hostile surveillance equipment, tactical nets, and countermortar/counterbattery radars. Chaff may also be used to mask their actions and protect their forces. ECM against electronic components of US weapons systems will be incorporated.

Defense Operations. During defense operations opposing forces use REC activities to gain time or to economize in one area to provide forces for another. These activities lend themselves to deception operations. In the defense, opposing forces increase SIGINT/ESM activities in support of their REC mission. The primary ESM targets are US tactical nets, fire control, and intelligence nets. During the conduct of the defense, EW is used to achieve an increase in combat power. EW establishes the priority to first attempt to destroy US emitters; therefore, the targeting of US emitters associated with command and control and

emitters associated with weapon systems is of the utmost importance. Opposing forces use chaff and jammers against counterbattery radars to protect their artillery and mortar support.

Air Defense Suppression. Airborne and ground-based electronic jamming equipment is used to jam and confuse US early-warning, gunlaying, and missile-controlling radars. Jamming operations directed against noncommunication emitters permit surprise air attacks and deny the use of radar-controlled fires. Selected aircraft from air armies and from long-range aviation are equipped with electronic jamming means. Tactical aircraft are equipped with pod-mounted jammers and chaff dispensers.

Section 3—Conventional Artillery and Antitank Operations

General

The opposing forces consider field artillery, air defense artillery, antitank weapons, and mortars (120mm and larger) as artillery. These weapons are organized into units that are assigned as support units at all tactical echelons.

Great emphasis is placed on the massing of artillery fires to influence the course of battle.

Artillery divisions, regiments and brigades are administrative commands. Their battalions and regiments are allocated to subordinate units as required.

Control of nuclear fires regardless of allocation of delivery units is retained by the front commander, unless specifically delegated to armies. Weapons having nuclear capability are sited approximately one-third of the maximum effective range from the leading opposing forces elements in the offense and two-thirds of the maximum range in the defense.

Artillery Conventional Weapon Systems

Mortars. Mortars are considered an important source of firepower and are used as infantry support weapons and field artillery weapons. The 240mm mortar can supplement artillery fire with either close-support or long-range fires.

Cannon. All weapons in this category are capable of delivering chemical/biological fires, and cannons of 152mm and above are assumed to have a nuclear capability.

Antitank Weapons. Improvements are continuous in high-velocity antitank weapons. Wire-guided antitank missiles mounted on motorized transporters or manpacked and fired from ground emplacements are available. All antitank guns can be employed for indirect fires.

Air Defense Artillery. This consists of cannon artillery and surface-to-air missile artillery as well as air defense machineguns. Air defense artillery weapons are organic at all levels down to battalion. (For further information see section 4.)

Allocation of Artillery

All commanders having assigned or attached artillery allocate a portion of this artillery to subordinate units commensurate with the tactical situation and the mission assigned. The artillery that is retained at each echelon is formed into provisional artillery groups as an artillery reserve, which has the following general missions:

- Long-range fires.
- Counterbattery fires.
- Block with fire those areas that have been subjected to nuclear fires.
- Support the commitment of the second echelon.
- Air defense protection.
- Reinforce the fires of the first-echelon artillery.

Each provisional group is tailored for specific missions. The composition of these groups may vary several times during an operation as allocation of artillery is one means that the commanders have of influencing the battle.

A provisional group is commanded by the senior artillery commander of the units composing the group. His headquarters acts as the group headquarters. Battalions in provisional artillery groups are used to replace artillery battalions of subordinate units made ineffective by nuclear fire.

Operations

Registration. Opposing forces register with either a single weapon, a platoon, or a battery. The resulting registration data may be transferred to all like-caliber weapons of the artillery group. HE ammunition is used when the registration is observed by a ground observer, radar, or sound ranging. Depending on ground conditions, ground bursts or airbursts are fired. Smoke is used when the registration is observed by an aerial observer. The registration gun, or base piece, fires one round. Once the initial sensing has been obtained, subsequent rounds are fired in four-round groups either by the base piece or by platoon or battery salvo. One or more four-round groups are fired until a 100-meter bracket has been obtained. If a platoon or battery salvo is used, the rounds are fired so that a converged sheaf (point target) is obtained. A deviation from the mean point of impact for the four rounds is determined, introduced into the settings, and becomes adjusted data.

Offensive Fires. Artillery fires in support of offensive operations are subdivided into three sequences or phases:

- Sequence 1. Preparation fires, centrally planned and executed, are normally 30 to 60 minutes in duration and immediately precede the attack by motorized rifle and tank forces. The preparation includes conventional artillery fires and air preparation and may include strikes of rockets and missiles. The artillery preparation normally is initiated with a powerful, surprise fire onslaught of all

the artillery and mortars against strongpoints in the main battle area and simultaneously against US artillery and mortars, dug-in tanks and antitank guided missiles (ATGM's), command posts, radars, and reserve forces in the immediate defensive positions. A second powerful fire onslaught, with the main mass of fire concentrated on artillery and mortar batteries, command posts, and strongpoints, is timed to coincide with the attack of the motorized rifle and tank forces.

- Sequence 2. Fires supporting the attack consist of scheduled and on call fires in support of the motorized rifle and tank forces. As attacking forces near US positions, the preparation fires are shifted, and fires in support of the attack commence. Opposing forces artillery doctrine requires continuous support of the attacking force with artillery and airstrikes right up to the accomplishment of the current combat mission. This technique insures the constant neutralization or destruction of the US force by concentrated fire.
- Sequence 3. Fires through the depth of the US defense are planned to give uninterrupted fire support during the neutralization of successive and final objectives. Displacements of artillery normally are required during this sequence and are made so that not more than one-third of the supporting artillery is out of action at any given time. When the attacking motorized rifle and tank units have advanced as far as the US regimental/brigade reserve and main artillery positions, control of artillery is decentralized and the artillery groups revert to the control of the supported regiment or division commanders.

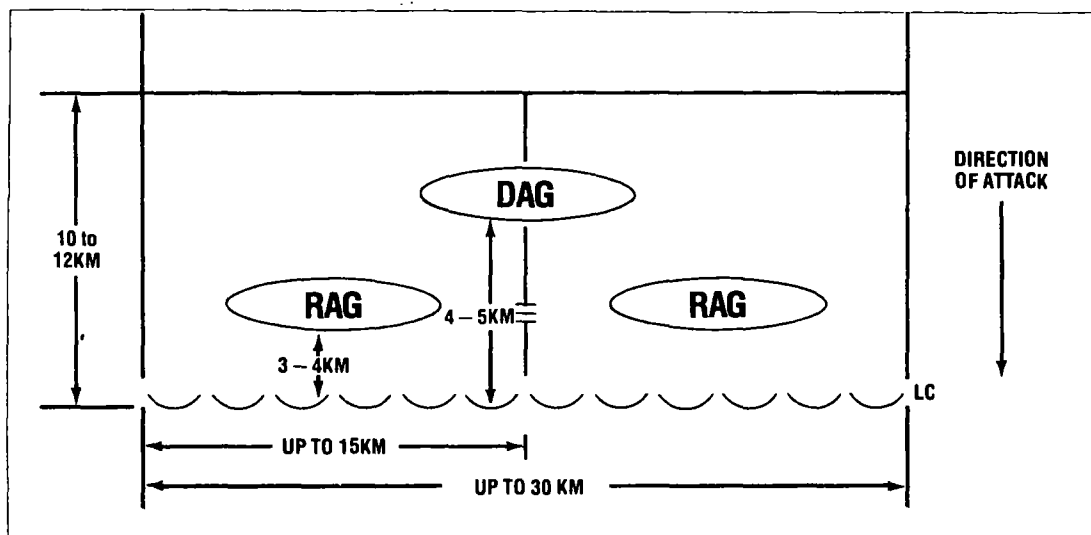
Accompanying Artillery

Opposing forces commanders provide for accompanying artillery to support maneuver forces with direct fire against US tanks, armored personnel carriers, antitank guided missiles, guns, machineguns, and field fortifications. Towed and self-propelled artillery and tank guns are used for direct fire. The 122mm D-30 or SP M1974 howitzer batteries organic to the motorized rifle regiments serve as accompanying artillery. Also the 152mm SP M1973 gun howitzer may be allotted for this task. The division commanders also attach an artillery battalion to a maneuver battalion serving as an advance guard in a division movement to contact or in pursuit operations. Additionally, an artillery battery normally is attached to the advanced party of the battalion.

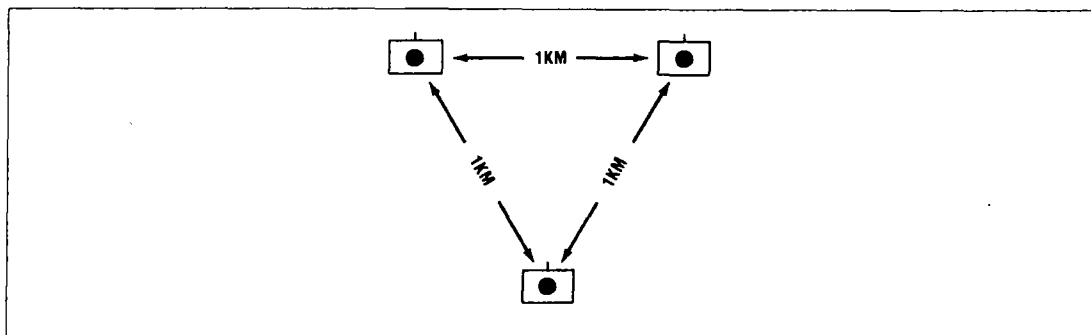
During an attack, accompanying artillery, supporting in a direct fire role, follows the first-echelon maneuver forces by 500 to 1,000 meters. The attacking platoons and companies allow sufficient lateral dispersion so that the accompanying guns can fire through the lateral gaps in the maneuver formation. Direct fire artillery engagement ranges normally are 500 to 1,500 meters.

Artillery Disposition

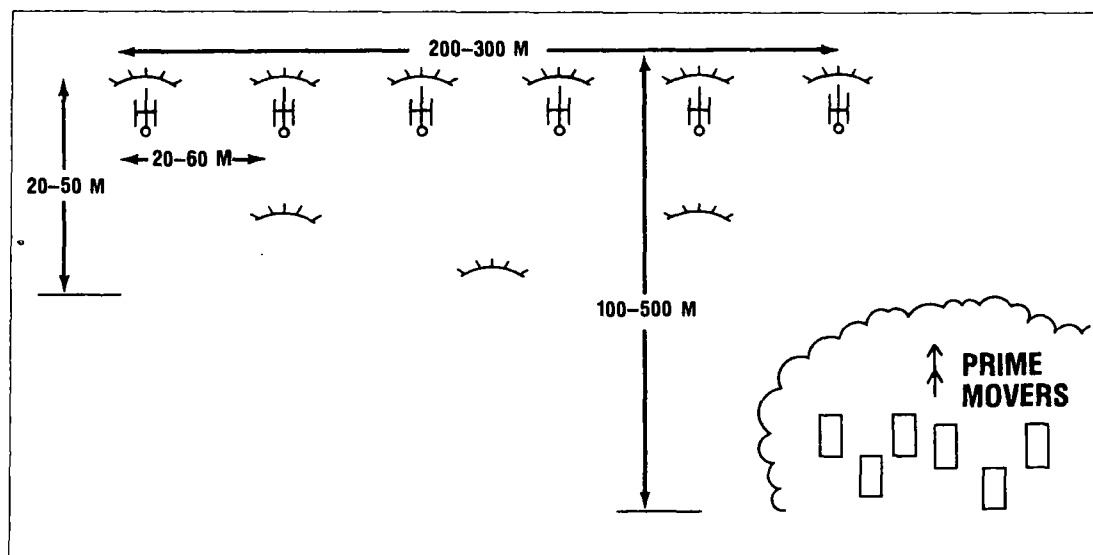
Artillery is deployed well forward so that at least three-fourths of the maximum range of the weapons is forward of the line of contact. RAG's composed of 152mm D-1 or SP M1973 and 122mm D-30 howitzers will be found 3 to 4 kilometers from the line of contact; DAG's composed of 152mm D-20 or SP M1973 howitzers and 130mm M-46 field guns, 4 to 5 kilometers from the line of contact.



An artillery battalion consists of three batteries and deploys with at least 1,000 meters between firing batteries. Actual dispositions depend on the terrain.



Artillery batteries normally deploy in a linear formation parallel to the line of contact. However, depending on the terrain and the situation, an artillery battery may adopt a "V" or a "U" formation. Artillery battery positions vary in hardness from prepared to unprepared, depending on the amount of time available for preparation of positions.



Defensive Fire Planning

There are five sequences (or phases) of defensive fire planning.

- Sequence 1. Long-range fires are planned against US troop concentrations to disorganize exposed forces and reduce their ability to fight.
- Sequence 2. Massed fires are planned on US assembly areas, tanks, command posts, and artillery prior to the attack.
- Sequence 3. Barrage and final protective fires are planned in front of the line of contact and throughout the main battle position.
- Sequence 4. Direct fires are used against US tanks that have broken through the forward defenses.
- Sequence 5. Fires are planned in support of counterattacks.

Antitank Operations

Antitank Fire Plan. The antitank fire plan is worked out in detail and coordinated at the highest possible level. Flanks and likely tank approaches are covered by mutually supporting antitank weapons sited in depth. Antitank groups are dispersed throughout columns of troops on tactical moves.

Antitank Reserves. Regimental, divisional, and sometimes army antitank reserves are formed both in attack and defense. They may consist of both guns and guided missiles and generally include an engineer mobile obstacle detachment (MOD) to lay hasty minefields in threatened areas. Tanks may also be included. The role of an antitank reserve is to deploy rapidly to meet tank threats.

Antitank Equipment

Antitank guided missiles have a wide distribution in opposing forces motor rifle units, but because of their minimum range limitations and low rate of fire, they do not provide a complete answer to the tank threat. The opposing forces, therefore, regard antitank guns as complementary to guided missile launchers. The majority of antitank tasks are likely to be satisfied by a mixed force of guns and guided missiles. But since the guided missiles are largely mounted on amphibious scout cars and infantry combat vehicles, they may be used initially without gun support in such roles as the early reinforcement of a bridgehead over a water obstacle.

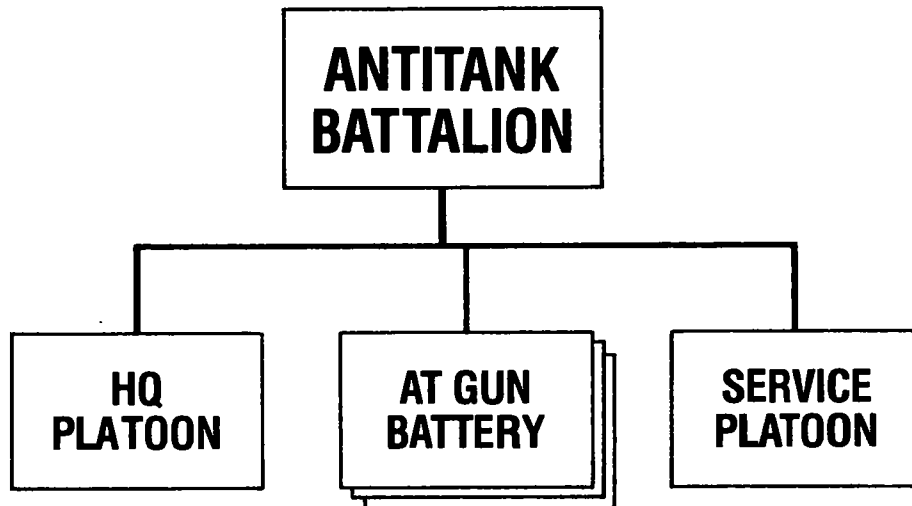
All conventional surface artillery up to 152mm caliber has a good direct fire antitank capability and carries a proportion of armor-penetrating ammunition. The 122mm howitzer D-30, with its 360-degree traverse, is particularly effective in this role. Field artillery is often deployed in direct fire positions.

Antiaircraft guns such as the ZSU-23-4, ZSU-57-2, and the 57mm S-60 will engage ground targets if required.

There are no antitank guns in an opposing forces tank division, and the only ATGM's are in the division's motor rifle regiment.

Antitank Battalion, Motorized Rifle Division

Organization and Equipment. The antitank battalion consists of three batteries, each with six 100mm T-12 antitank guns. A battery has two antitank platoons, a command and observation post (COP) and a reconnaissance section. Whenever possible, the battalion is reinforced with engineer subunits.



UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	100mm AT GUN T-12	TRK	APC BTR BMP BRDM													
BN HQ	6	25	31		9	2													
AT BTRY (3)	15	180	195	18	30														
SERVICE PLT	2	54	56		11	1													
TOTAL	23	259	282	18	50	3													

Tactics

The antitank battalion will normally form the nucleus of the divisional antitank reserve, which may also include field artillery, tanks, ATGM's, and engineer minelaying equipment.

Deployment. Antitank guns may be deployed in line, in two lines, be echeloned right or left, or form a horseshoe. These formations may be adopted by guns within a battery or by the batteries of a battalion. Within a battery position, guns are often sited by platoons (three guns).

Individual guns may be up to 300 meters apart (normally 300 to 500 meters). Subunits are normally sited with overlapping arcs of fire.

Battalion and battery commanders control the fire of their guns from command and observation posts, normally collocated with one of the fire positions. The battery reconnaissance section deploys as a forward observation post to give warning of approaching US tanks.

Antitank guns will normally move forward from covered and concealed positions to direct fire positions with covering artillery fire. Occupation of a fire position takes about 10 minutes.

Antitank minefields may be laid by the MOD 1.5 to 2 kilometers in front of antitank fire positions on the main tank approaches.

During an offensive the divisional antitank reserve usually moves behind the advancing tanks and infantry on the most exposed line of advance ready to repulse US armored counterattacks. Successful fire positions will be chosen by the formation commander to cover likely tank approaches.

The Attack. In preparation for an attack, antitank guns may have the following tasks:

- Contain US armor.
- Cover the deployment of the attacking units.
- Engage armored and antitank targets on the forward edge of the US position as part of the preparatory fire.

During the attack antitank subunits will:

- Cover the flanks.
- Cover the deployment of second-echelon regiments.
- Provide a screen for sectors subjected to US nuclear strikes while reorganization takes place.
- Assist in consolidation on the objective.

Fire positions are selected to the depth of the US positions from which to defeat armored counterattacks. Having received orders to deploy to one of these lines, the battalion commander will lead his guns forward, put out observation posts

and move himself to a position from which he can direct fire. He will establish close cooperation with the all-arms commander and the MOD.

During the offense antitank guns may be deployed unprotected in the open. The opposing forces consider a ratio of a loss of three to four antitank guns to one US tank destroyed as acceptable.

Defense. The tasks in the defense are:

- Destruction of US tanks and APC's that have penetrated the first defensive echelon.
- Reinforcement of antitank defenses of the first echelon.
- Covering gaps in the antitank defense caused by US nuclear weapons.
- Covering the deployment of counterattack forces.

At the start of a defensive action the antitank reserves normally occupy covered and concealed positions in depth from which they can cover the most likely tank approaches. On each possible approach the battalion commander selects from one to three firing lines to which his guns may deploy. Subunit reconnaissance and engineer preparation of routes and fire positions follow if time allows. During the battle batteries remain at constant readiness to advance from their covered and concealed positions to repulse US armor from prepared or unprepared positions.

Antitank Guided Missile Battery, Motorized Rifle Regiments

Organization and Equipment. The ATGM battery consists of three platoons, each with three BRDM SAGGER launching vehicles. Platoon and battery commanders have BRDM scout cars mounting 14.5mm machineguns and carrying means of target illumination for night combat.

The ATGM battery forms the basis of the regimental antitank reserve, which also usually includes MOD to lay hasty minefields in threatened areas. There is no ATGM battery in a tank regiment.

Because the SAGGER has a minimum range of 500 meters, the RPG-7 grenade launcher which has a maximum effective range of 500 meters, is used by SAGGER detachments to cover this area. The wire guided missile reaches its maximum range of 3,000 meters in about 25 seconds, leaving a smoke trail signature.

Control is normally exercised by radio. For internal communications the ATGM battery uses R-105 vehicle-mounted VHF radios, which have a remote facility for dismounted action. The rear link employs the standard AFV radio, the VHF R-123.

Each BRDM SAGGER carries six missiles ready for launching and eight in reserve. Additional missiles are carried within the battery by three URAL-375 5-ton trucks.

Battery Deployment. The battery can deploy with from 30 to 300 meters between vehicles and up to 1,500 meters between platoons; normal frontages are 500 meters per platoon and 1,500 meters per battery. Battery and platoon commanders control the fire of the launchers from OP's which are usually sited slightly to the rear and preferably on high ground. In good tank country platoons are likely to be in line, but in broken country one or more subunits will be in depth and platoons may be deployed independently. Within platoons vehicles may be one-up, two-up or echeloned to a flank. Whenever possible, ATGM's will be located on high ground clear of close or wooded country.

- **Launcher Drills.** Each launcher is normally given an 8-degree arc of fire, overlapping with those of its neighbors.
- Missiles are usually launched when the BRDM is stationary, preferably behind cover or, in defense, in a prepared emplacement.
- The missiles may be fired and controlled remotely from up to 80 meters. The standard time for setting them up is about 1.5 minutes.
- The normal drill is to fire no more than two missiles, then move at least 200 meters to a new firing position.
- A SAGGER detachment will change its position if under accurate fire or when attacked by infantry unless it has a missile in flight, in which case it is required to remain in place until its target is missed or destroyed.

Phases

The Advance. The ATGM battery column, headed by its commander, will usually move behind the advance guard, often together with regimental headquarters. During an encounter battle the battery may follow the first-echelon battalions at a distance of 400 to 2,500 meters ready to repel US armored counterattacks and cover flanks. Fire positions are selected by the battery commander who normally calls his battery forward by radio and then moves to an OP from where he can direct fire.

The Attack. During an attack from the line of march the ATGM battery may move close behind the leading AFV's, deploying to engage point targets in the main battle area. The vehicles are very vulnerable, however, because of their comparatively light armor. Alternatively, the battery may be held by the regimental commander as his antitank reserve, to be committed in the event of a US counterattack. In this case it will move initially to a waiting area. Against a counterattack in battalion strength or greater, the entire battery would be deployed.

Defense. In defense the antitank reserve is likely to be held in a concealed position with a number of alternative positions reconnoitered and prepared. ATGM's could be deployed, however, well forward to extend the range of the antitank defenses.

Withdrawal. During a withdrawal the ATGM battery is used to cover the retirement of forward regimental elements. The battery itself is required to break contact and withdraw to a new firing position when US fighting vehicles have closed to 500 meters.

Section 4—Ground Forces Air Defense Operations

General

The opposing forces ground forces possess an impressive arsenal of air defense weapons which are coordinated in the air defense staff at each formation headquarters. The basis of the air defense is:

- Zonal cover by front and army surface-to-air missile regiments and brigades, coordinated with fighters of the tactical air army.
- Point protection by divisional antiaircraft regiments and by regimental light air defense weapons.
- A comprehensive and efficient acquisition and warning system which provides air defense units with targets and combat units with warnings of attack.
- Jamming. (section 2, Signals Intelligence and Radioelectronic Combat.)
- Opportunity shooting by individual antiaircraft machineguns such as those mounted on tanks.
- Emphasis on the need for engaging US aircraft by all weapons that can be brought to bear.

Air Defense Doctrine

The employment of divisional air defense weapons is based on three significant factors: one, deployment of a complementary family of surface-to-air missiles (SA-6, -7, -8, -9) and antiaircraft guns (ZU-23, ZSU-23-4, ZSU-57-2, S-60); two, mobility of weapons; and three, the ability to mass weapons. Additional surface-to-air missiles from army or front level can be employed to provide attacking forces with a protective air defense envelope to 21,300 meters.

In the offense, air defense artillery protects march columns, units, and materiel in assembly and deployment areas. Air defense artillery can also be used in a ground support role if air superiority has been achieved. During the artillery preparation for the assault, air defense artillery, in addition to its primary mission, is used to fire against hostile fortifications, firing positions, and observation points.

In the defense, priority air defense protection is given to major rear installations and rail centers.

Low-altitude air defense is defined by the opposing forces as that dealing with targets below 4,000 meters. The opposing ground forces have prime responsibility for their own defense in this altitude band.

Air Defense Planning

The divisional air defense staff will receive early warning messages from the army air defense staff, on the basis of which it will select and allocate targets.

Divisional and regimental air defense subunits may operate independently within outlined orders, but centralized fire control applies whenever conditions permit.

Factors affecting air defense deployment include:

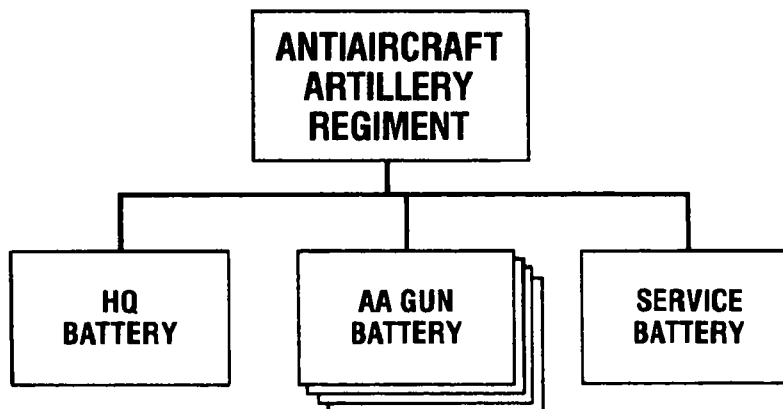
Importance of the Target. Likely targets are protected in accordance with their usefulness to the commander. Targets will be protected in the following probable priorities:

- Nuclear delivery means.
- Headquarters.
- Assembly areas, river crossings, and defiles.

Mutual Support. There should be mutual support between different weapons systems and between flanking formations to cover all altitude bands and approaches with an emphasis on the most likely approach routes.

Attrition. Air defense weapons are sited to engage attacking aircraft for the longest possible time.

Antiaircraft Artillery Regiment, Tank and Motorized Rifle Divisions



UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	57mm AA GUN S-60	TRK	RADAR (TA) FLAT FACE	RADAR (FC) FLAP WHEEL	APC BTR, BMP BDDM											
REGT HQ	7	50	57		8	1		2											
AA GUN BTRY (4)	20	264	284	24	48		4												
SERVICE BTRY	5	78	83		28														
TOTAL	32	392	424	24	84	1	4	2											

General

A regiment consists of four batteries with six 57mm S-60 guns in each battery towed by URAL-375 trucks. The guns are radar-controlled, each battery having either one FIRECAN (SON-9 fire control radar) and one RANGER (PUAZO-6 predictor) or the more modern FLAP WHEEL, which incorporates both fire control and predictor. Regimental headquarters is equipped with early warning radars and IFF (interrogate friend or foe) sets.

Tasks. The divisional antiaircraft regiment will concern itself primarily with protecting the following:

- In the initial stages of deployment, assembly areas with priority to tank and motor rifle regiments.
- Battalion deployment areas usually located some 8 to 15 kilometers from the line of contact.
- Divisional headquarters.
- March routes.
- Vulnerable points on routes, water obstacle crossings and defiles.
- Bridging sites.

Deployment.

- It will be unusual in the opposing forces army for the antiaircraft regiment to be split up, the only normal exception being for route protection.
- A regiment can provide air cover for an area of about 54 square kilometers, and a battery of about 13 square kilometers. Batteries will be 4 to 5 kilometers apart.
- On a route a regiment can protect a length of 30 kilometers and a battery 7 or 8 kilometers. In these circumstances guns may be split down to platoons of three, each platoon being 2 to 3 kilometers apart.
- A battery will normally take up a hexagonal formation with guns 30 to 50 meters apart, connected by cable to a centrally-sited generator and to the radar.
- Guns can be brought into action very quickly.
- Gun in action firing from wheels—5 seconds.
- Gun in action—20 seconds.
- Battery in action with predictor—10 to 14 minutes.
- Battery fully in action with radar—25 to 30 minutes.

Regimental Antiaircraft Battery

Organization and Equipment. The regimental antiaircraft battery consists of one platoon of four ZSU-23-4 self-propelled AA guns with on-board radar and one platoon of four BRDM-2A's mounting the SA-9 short-range low-altitude SAM system. The obsolescent 57mm ZSU-57-2 and towed ZU-23 and ZPU-4 AAMG's are still sometimes used by tank and motorized rifle regiments.

The ZSU-23-4 has an effective range of 2,500 to 3,000 meters. It can detect helicopters hovering behind woods or on hillcrests and can engage targets while moving at speeds up to 25 kmph.

The SA-9 has an unknown effective range, but it is probably greater than that of the SA-7.

Coordination at regimental level is effected by means of a recently introduced air defense command post.

Tactics. The ZSU-23-4 normally operates in pairs within the combat formations of tank or motorized rifle battalions. On the line of march ZSU-23-4 detachments will travel in tank or motorized rifle battalion columns, usually near battalion headquarters. When a battalion deploys for combat, its ZSU-23-4 detachment will follow the first line of assaulting AFV's at a distance of up to 400 meters with 200 meters between weapons, firing on the move or from short halts. During an assault river-crossing ZSU-23-4 detachments will be ferried to the far bank immediately after leading companies.

During an advance to contact, the regimental SA-9 platoon moves in column close to the regimental headquarters. When the regiment moves into an attack, SA-9 vehicles may be deployed to suitable vantage points about 1 to 3 kilometers from the line of contact to cover the troops in attack. They will be particularly aware of the ATGM helicopter threat. In the defense the SA-9 will be sited in the area of regimental headquarters or second-echelon battalions.

The ZSU-57-2 is deployed in much the same way as the ZSU-23-4, while the ZU-23 and ZPU-4 will take on such semistatic tasks as the defense of command posts and river-crossing sites.

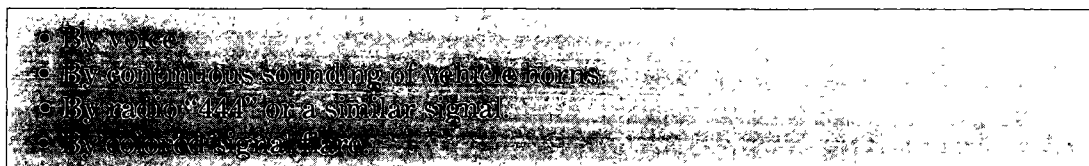
Battalion Air Defense

In addition to attached ZSU-23-4 subunits and additional cover provided by other regimental and divisional SAM and AA units, each battalion has organic air defense weapons.

Three shoulder-launched SA-7's are normally found in each motorized rifle company, carried in the company commander's AFV. Their operators may be expected to observe and be ready to engage air targets even while on the move, and will dismount to follow the infantry on foot.

Many tanks and some other AFV's mount 12.7mm AAMG's.

Air defense warnings are broadcast by the army air defense cell to R-311 receivers held by all arms at battalion level. Local warnings are given:



Section 5—Tactical Air Support Operations

General

The opposing forces heavily stress the role of tactical aviation in support of ground forces. During the past few years there has been a steady increase in the number and quality of aircraft assigned to frontal aviation, the opposing forces "tactical air force." *Today frontal aviation operates some 4,500 fighter, attack, reconnaissance, and light-bomber aircraft in addition to the 3,000 fighter aircraft assigned to the air defense of the homeland.*

Organization

Frontal aviation is a component of the opposing air forces from an organizational viewpoint. However, on an operational basis, the aircraft regiments are formed into air armies assigned to fronts or major groups of opposing forces, and thus come under FRONT operational control.

In addition to the tactical combat aircraft under frontal aviation, several thousand transports and helicopters are assigned to specific air armies to support FRONTS or major groups of forces.

Concept of Air Support

Opposing forces air armies are used to assist ground forces in accomplishing their missions. Tactical air armies are organized for combat to permit ready attachment of subordinate units to or in support of ground forces.

In carrying out its close support mission, the tactical air army uses fixed-and rotary-wing aircraft to execute such missions as reconnaissance, artillery observation, transport, communication, liaison, and medical evacuation.

The opposing forces recognize that part of their air effort will be initially required to obtain local air superiority. Fighter units of the air army have the dual mission of providing air defense and close support for opposing ground forces. Attack and bomber units are used to engage targets beyond the range of artillery and to reinforce artillery fires on selected targets and targets of opportunity. A combined bombardment by bombers and ground attack aircraft is coordinated with artillery preparatory fires. After the ground attack has begun, tactical air flies close support missions for the ground elements. *Priority tasks for tactical air are the destruction/neutralization of hostile nuclear delivery means and other targets beyond artillery range.*

Tactical Air Reconnaissance

A typical air army has two or more independent reconnaissance regiments that provide tactical air reconnaissance in support of both air and ground operations. The mission of these regiments is to obtain tactical intelligence by visual, photographic, and electronic means. They are capable of providing sustained, near all-weather, day or night reconnaissance of routes, zones and areas. Reconnaissance versions of the MIG-25 and -21 aircraft perform deep penetration missions and provide coverage nearer the line of contact for divisions and lower

echelons. They have photo capability plus a day/night multisensor capability, including side-looking airborne radar (SLAR) and infrared. They can operate from unimproved forward airstrips. A reconnaissance regiment has three squadrons, each of which is composed of 12 aircraft. Each reconnaissance regiment also has an imagery processing and interpretation battalion.

Reconnaissance Aircraft

The MIG-21, FISHBED, a supersonic single-seat fighter equipped as a specialized tactical reconnaissance aircraft, comes in two versions. The MIG-21R FISHBED-H has a pod containing forward-facing or oblique cameras, infrared sensors or electronic countermeasures (ECM) devices, and fuel mounted on its fuselage centerline pylon. There is a suppressed antenna at midfuselage; optional wingtip fairings house other ECM equipment. The MIG-21RF FISHBED-H carries similar equipment.

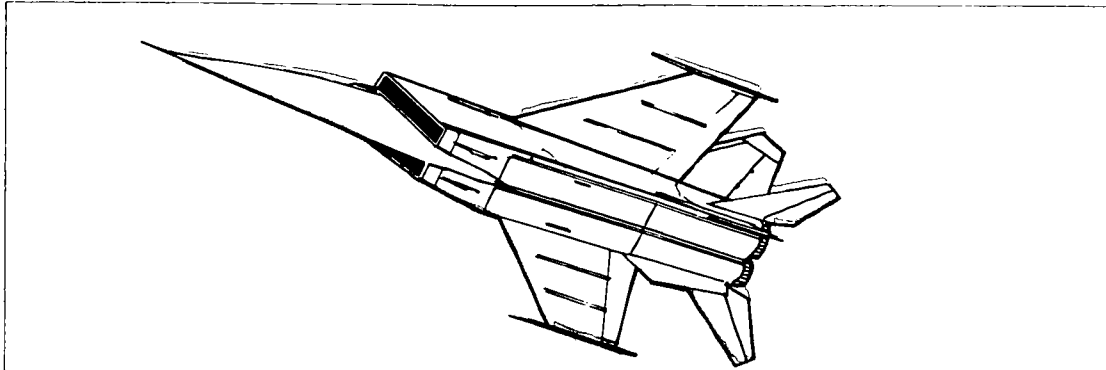
The MIG-25, FOXBAT-B, with cameras aft of the small nose cone, is the newest reconnaissance aircraft of the opposing forces. Its maximum speed is MACH 3.2, service ceiling 24,384 meters and combat radius 800 miles.

The Tupolev TU-126, AWACS (Airborne Warning and Control System) MOSS, based on the TU-114 airliner, has reduced cabin windows, a flight refueling noseprobe, ventral fin, lengthened tailcone, and numerous antennae and blisters for electronic equipment, as well as the early-warning radar in an 11-meter rotating "saucer" above the fuselage. Its primary task is to provide early warning of approaching US aircraft at any level down to sea level and direct interceptors toward the intruders. The MOSS is also believed to assist opposing forces attack aircraft to elude US interceptors picked up by its radar. It is said to operate most effectively over water, with limited "look-down" capability over land.

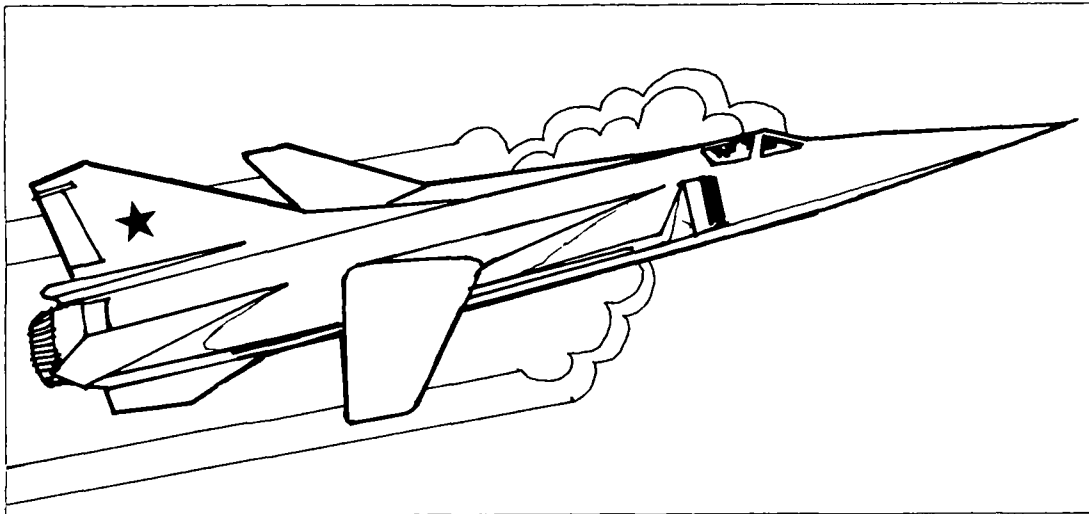
Tactical Support Aircraft

Opposing forces efforts to boost tactical air capabilities have grown significantly during the past 20 years. *Today, the opposing forces have aircraft capable of meeting all proven military requirements.*

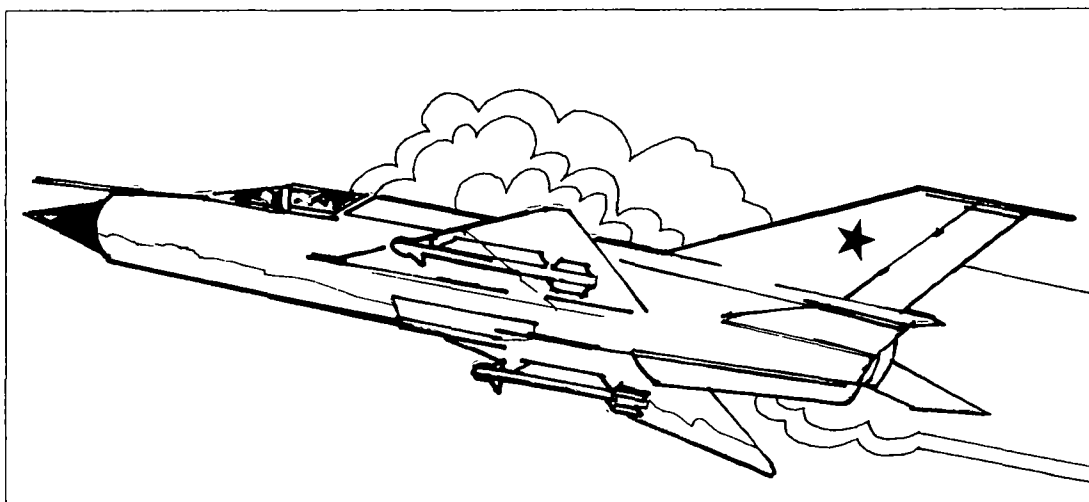
The MIG-25, FOXBAT, is the latest fighter in the opposing forces aircraft arsenal. It is the fastest weapon-carrying aircraft in service with any air force in the world. The FOXBAT holds a height record of 36,240 meters and a speed record of 2,980 kmph over a 500-kilometer circuit. The MIG-25 is used for high-speed reconnaissance (MIG-25B) and air interception (MIG-25A).



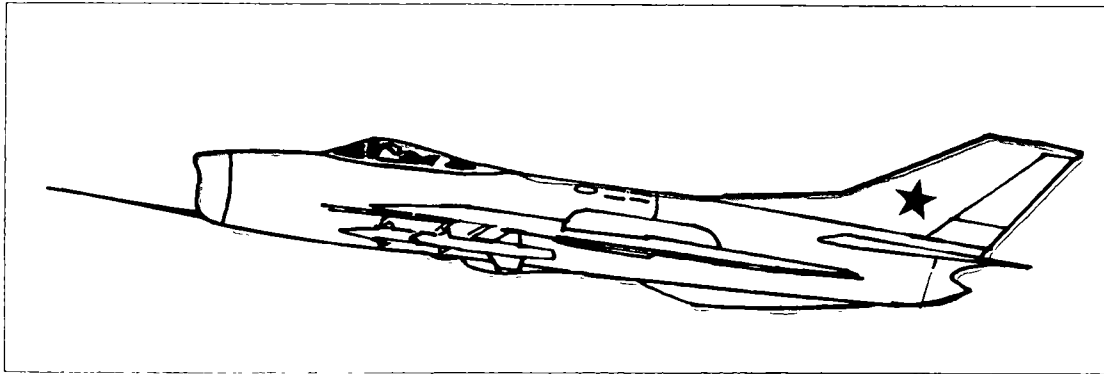
The **MIG-23, FLOGGER**, is a variable-wing fighter that mounts a 23mm gun, plus externally loaded ordnance on wing pylons. Its maximum speed at altitude is MACH 2.3, MACH 1.1 at sea level. The FLOGGER's service ceiling is 17,983 meters and combat radius is 960 kilometers. Three other versions are also operative: the MIG-23B FLOGGER-B, a single-seat tactical fighter; the MIG-23U, FLOGGER-C, a tandem two-seater for both operational training and combat use; and the FLOGGER-D, which is primarily designed for a ground attack role.



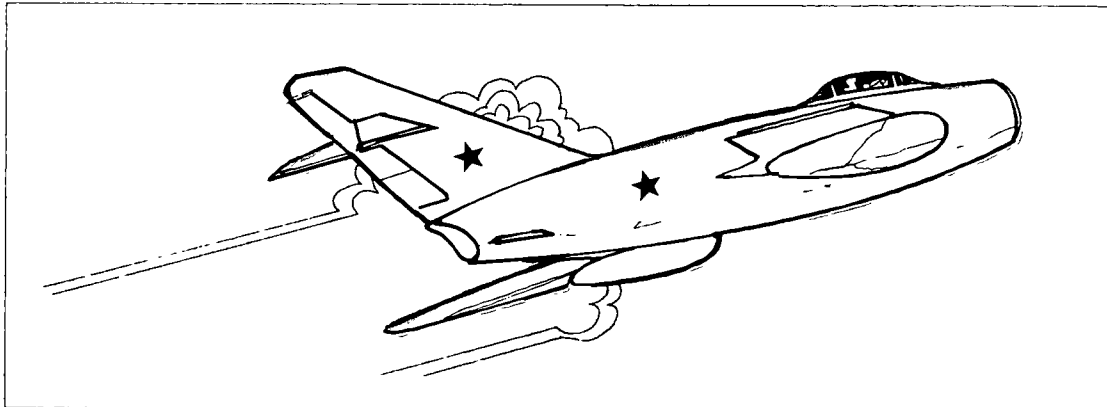
The **MIG-21, FISHBED**, the most widely used fighter in the opposing air force, has a maximum speed of MACH 2.1 above 10,973 meters and MACH 1.06 at low altitude. Its service altitude is 17,998 meters and range is 1,000 kilometers on internal fuel or 1,811 kilometers with three external tanks. The FISHBED can be armed with 23mm guns, air-to-air ATOLL missiles, 57mm rocket packs, 1,100-pound or 550-pound bombs or from 5 to 24, 240mm air-to-surface missiles. Of all the variations of the MIG-21, the FISHBED-J is the newest and highest performance aircraft.



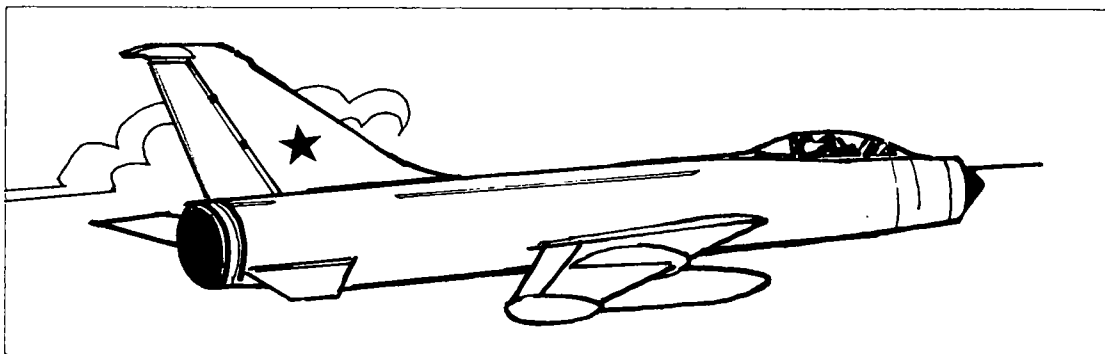
The **MIG-19, FARMER**, although used primarily by allies of the opposing forces, is still found in use by the opposing air force as a day fighter. Its arms include 212mm air-to-surface rockets, 30mm guns, and rocket pods.



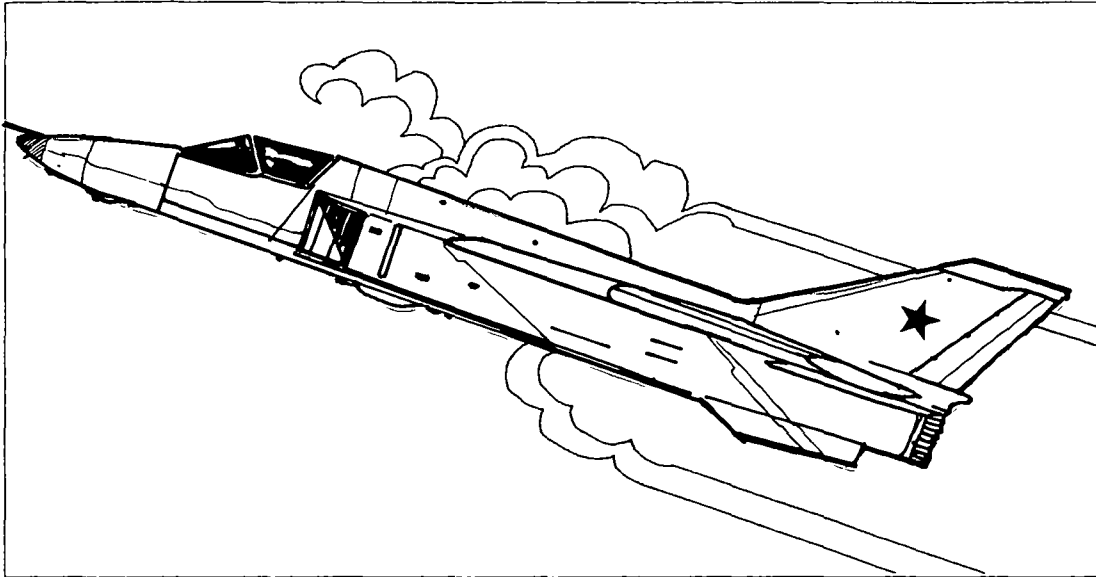
The **MIG-17, FRESCO**, used by opposing forces tactical support units, is a subsonic fighter armed with 23mm guns, rockets, and bombs. Like the **FARMER**, the **FRESCO** is being replaced by newer planes. Its maximum speed is 1,140 kmph at sea level, service ceiling is 17,526 meters, and combat radius is 579 kilometers with two 550-pound bombs and two drop-tanks.



The **SUKHOI SU-7, FITTER-A**, used by opposing forces tactical units for ground support missions, is armed with two 30mm guns plus two 1,650-pound and two 1,100-pound bombs or rocket pods. Today, an estimated 500 SU-7's are believed to serve with tactical units of the opposing air force. The **FITTER-A** has a maximum speed of MACH 1.5 at 10,973 meters or 853 kmph at sea level, a service ceiling of 15,150 meters and combat radius of 320 to 480 kilometers. An upgraded version, the **SU-17, FITTER C**, is being introduced into the forces. The **FITTER C** has variable geometry wings and improved speed, avionics, range and payload. It has a top speed of MACH 2.3 at altitude and 1,240 kmph at sea level. It has 8 external weapon stations and a maximum payload of 11,000 pounds.



A new combat aircraft, known as the **SUKHOI SU-19, FENCER**, is the first modern opposing forces fighter to be developed specifically as a fighter-bomber for the ground attack mission. It has side-by-side seating for a crew of two and variable-geometry wings. The FENCER might have a laser seeker/rangefinder and Doppler equipment rather than a large radar. FENCER is believed to have a combat radius of over 900 kilometers, one 23mm GSh-23 twin-barrel gun in belly installation, six weapon pylons under the fuselage and wingroot gloves for more than 4,536 kilograms of guided and unguided air-to-surface weapons.



Air Support of Offensive Operations

Air Support of the Artillery Preparation. During the artillery preparation, the air army attacks targets that are out of the artillery range. Aircraft concentrate on US forward defenses immediately prior to infantry and tank assaults. The air attack, supplementing the artillery fire, is of short duration. Specially detailed artillery batteries neutralize US air defense during the air attack.

Air Support of the Attack. Once the attack is launched, bombers attack US rear area installation; attack aircraft execute strikes against targets whose destruction or neutralization assists ground assault units; and fighters supplement the bombers and attack aircraft and protect air and ground units from US air attack.

Exploitation Phase Support. During the exploitation and pursuit, the available air strength is used for attacks on the retreating forces and on advancing US reserves. The air efforts are directed to adding impetus to the pursuit.

Air Support in the Defense

Opposing forces tactical air armies in the defense use the same basic tactics as in the offense. However, different types of missions are emphasized. In supporting the defense, air armies carry out the following specific missions:

- Reconnaissance.
- Counterreconnaissance.
- Destruction of nuclear or chemical firing capabilities.
- Destruction of air bases.
- Attacks on concentrations, to include delivery of nuclear or chemical fires.
- Airstrikes in close support of forces in contact.
- Attack of penetrations.
- Support of counterattacks.

Air Support of Retrograde Operations

The opposing air force activity actively supports retrograde operations by providing air cover; reconnaissance of US activities, especially those threatening the flanks of the retreating forces; delivery of airstrikes against the US force's main grouping and its flanking forces; interdiction of the US force's attempt to block the withdrawal by use of amphibious landings or airborne or airlanded forces, destroying on the ground any such forces that have succeeded in landing; and disruption of US lines of communications:

Close Air Support

Opposing forces have a variety of aircraft that can provide close air support to ground operations. Most MIG aircraft can carry two bombs and some later versions of the MIG-21 can carry up to four. The primary ground attack aircraft are the FITTER series including the SUKHOI SU-7B FITTER A and the SU-17/20 FITTER C. All general ordnance such as rockets, bombs, cannon, and cluster bomb units (CBU) can be carried by the FITTER series. There are also a number of multirole aircraft that may be encountered in a ground attack role. These include the FENCER RSU-19 and the BREWER YAK-28.

Techniques of Close Air Support

In carrying out its close air support role, the tactical air of the opposing forces flies missions in support of their combat formations, especially the tank and motorized rifle elements. Fighter units maintain air cover over ground formations by achieving and maintaining air superiority. As the battle progresses, small formations of opposing forces aircraft remain constantly in the air to attack, either on their own initiative or on instructions from the ground units, those US targets that threaten or impede the conduct of the battle. The number of aircraft in a formation is normally four to eight. (This may vary considerably because of antiaircraft defenses, ordnance load, terrain, etc.) A probable ordnance load for a flight of four includes:

- Aircraft 1 and 2: Rocket pods, bombs, and cannon.
- Aircraft 3 and 4: CBU's and cannon (23mm/30mm).

The majority of opposing forces close air support attacks in the main battle area will be at less than 1,000 meters altitude and at speeds of less than 500 knots. However, the air doctrine of opposing forces is continually evolving and preconceived ideas as to the attack speeds, altitudes, and ordnance are dangerous because of the different forms these attacks may take. Following is a chart depicting typical types of weapons available to opposing forces and the type targets against which these weapons may be employed:

WEAPON	METHOD OF ATTACK	TYPICAL TARGETS	REMARKS
CANNON	10°-30° Dive Low level	a. Troops, particularly in open b. POL c. Softskin vehicles	a. SAP, HE warheads b. Very accurate c. Must hit to kill d. Ineffective against armor, but could achieve mobility kill by damaging tracks
ROCKET	10°-30° Dive Low level	1. Armor b. Light bridges c. Ships, barges, etc. d. HQ's, COMCEN's, etc. e. Softskin vehicles	a. AP (solid), AP (hollow charge or HE warheads b. Podded c. Very accurate d. Must hit or near miss to kill
NAPALM	Level-10° Dive Low level	All except heavy structures	a. Delivered from 50-20 meters b. Attacking aircraft max surprise/min vulnerability c. Less accurate d. Hydrocarbon fuel + chemical gel for better adhesion to target
BOMBS	Level-45° High or low level	a. Armor (concentrations only) b. Area targets c. Concrete d. Field defenses	a. Large damage envelope results. Bombs must be delivered high level or in dive, except retarded "laydown" at low altitude b. HE warheads c. Relatively poor accuracy in dive attack
CBU	Low level	a. Groups of armor b. Other vehicles c. Personnel, particularly in open	a. AP (hollow charge) b. Fragmented casing c. Area weapon d. Good accuracy

Following are examples of attack profiles which may be flown by opposing forces pilots:

SERIAL	WEAPON	DIVE ANGLE (degrees)	STARTING HEIGHT (meters)	WEAPON RELEASE HEIGHT (meters)	AIRCRAFT HEIGHT (over target) (meters)	AIRCRAFT SPEED (km/ph)	HORIZONTAL GROUND RANGE (meters)
1	BOMBS	30	1,524	810	365	830	1,110
2		20	1,219	762	304	830	1,460
3	ROCKETS	30	1,066	475	245	740	800
4		10	304	152	60	830	900
5	CANNON	30	914	475	243	474	800
6		10	243	94	45	925	530
7	LABS	"Over the shoulder" method Toss bombing	60	2,438 to 4,572		850	Over target
8	LABS		60	1,524		850	3,200-2,700 approx
9	NAPALM	0	60	60	60	925	900
			30	30	30	494	400
10	CLUSTER BOMB	0	152	152	152	830	1,200
11	RETARDED	0	121	121	121	830	320

Section 6—Helicopter/Air Assault Operations

General

The opposing forces are increasingly stressing the importance of helicopters in military operations. Although helicopters are assigned in support of opposing ground forces principally in a logistical role, reconnaissance and observation missions continue to be important. In recent years the opposing forces have paid increased attention to the use of helicopters in combat assault troop lift and fire support roles.

Although the opposing forces assignment of helicopters in the battlefield environment differs sharply from that of the US Army, i.e., large numbers of helicopters organic to divisions, opposing forces and US concepts of the role and usefulness of helicopters are apparently similar.

Organization

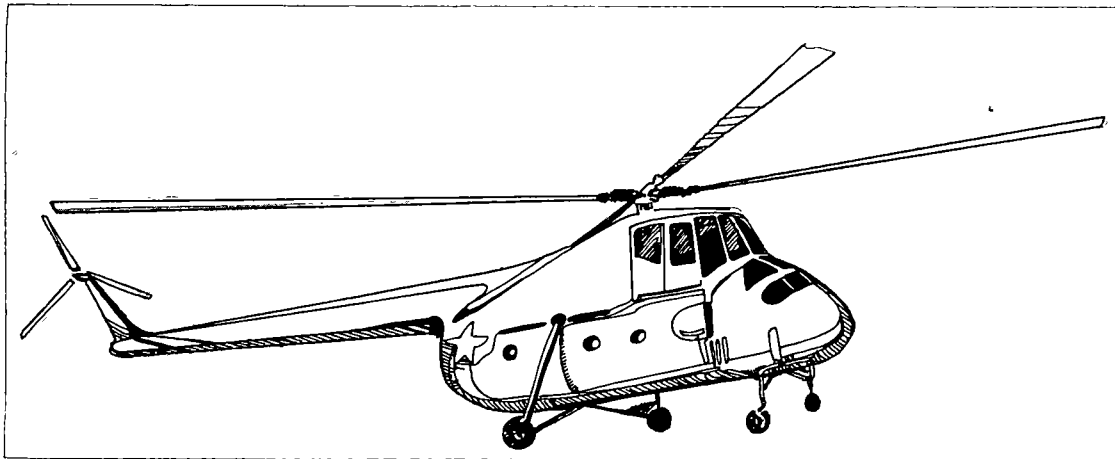
Most of the estimated 2,500 helicopters that can be made available to support opposing ground forces are officially assigned to military transport aviation; however, on an operational basis, these helicopters are provided to front commanders and then allocated as necessary to lower organizational levels for specific missions and operations.

Most opposing forces divisions appear to have only five or six helicopters within their own organizational elements for divisional liaison missions.

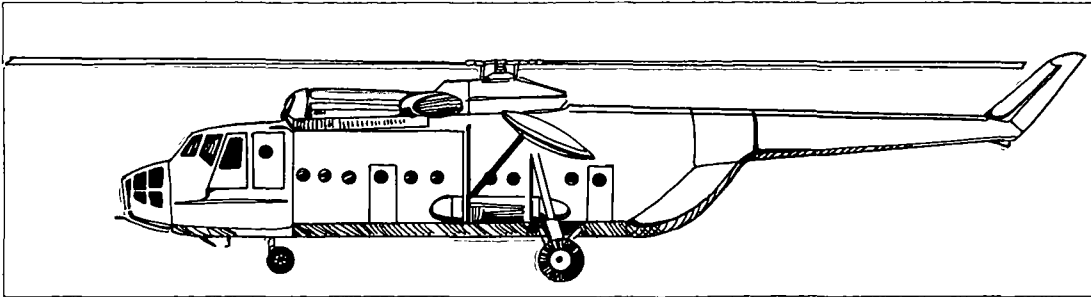
Helicopters are organized into regiments according to the type of helicopter employed. Their mission includes the airlift of personnel during tactical operations and the transport of supplies, equipment, and personnel during other than combat conditions. All helicopter regiments are organized in a similar manner except the light helicopter regiment, which has a company of utility helicopters in each of its subordinate squadrons.

Equipment

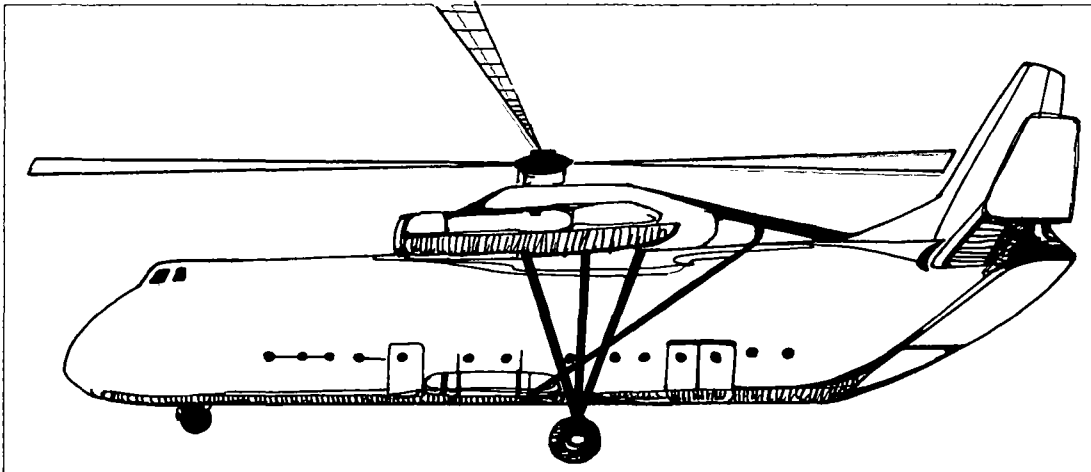
The older MI-4 HOUND is being replaced by the MI-8 HIP as the standard troop carrier for helicopter assault operations. Both may have externally mounted rocket pods on either side of the cabin.



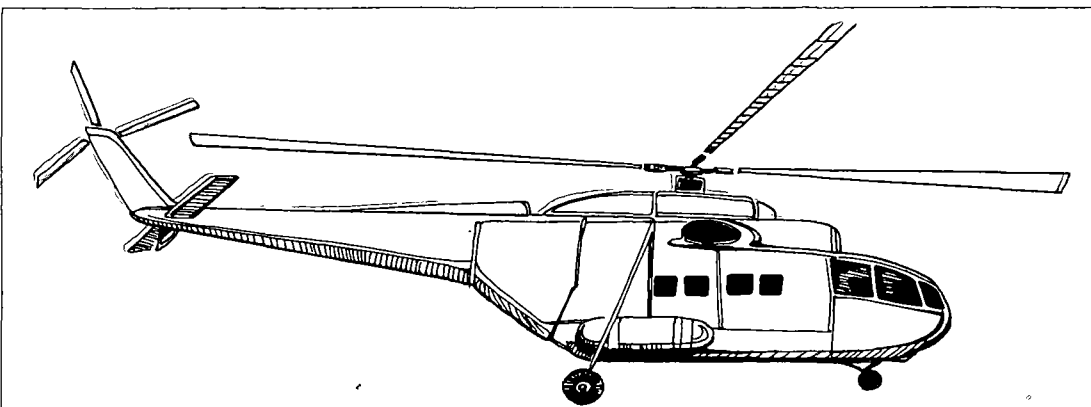
The primary tactical heavy cargo transport helicopters include the MI-10 HARKE flying crane and the MI-6 HOOK. The HOOK can carry up to 65 troops in addition to sling-carried heavy cargo.



The opposing forces MI-12 HOMER is the largest helicopter in the world, having set numerous records in lift capacity. HOMER is easily recognized by its distinctive lateral train rotors at the wing tip. Large numbers of troops can be transported along with heavy equipment such as tanks and missile systems.



The newest helicopter in the opposing forces inventory is the MI-24 HIND, a helicopter that appears in several versions. HIND-A is fitted with mountings for four SWATTER antitank missiles, two on each subwing, and four other stores, including pods, each containing thirty-two 57mm rockets, under subwings. The HIND-A carries a nose-mounted 12.7mm machinegun and is capable of lifting light combat-loaded troops.



Fire Support Operations

The opposing forces are increasing the firepower of helicopters, with the aforementioned HIND-A being the most significant development. In addition to cannon and machineguns, helicopters are being armed with guided and unguided missiles.

Opposing forces publications have noted the effectiveness of heavy armed helicopters to operate at low altitudes and to remain in zones of AA fire for short periods of time.

The opposing forces also stress the need for defensive measures against US helicopters in combat situations, noting the need to be alert and to react rapidly when defending against attacking helicopters.

Airmobile Operations

General. To improve the ground combat effort and increase mobility and flexibility, the opposing forces have recently emphasized training and development of existing troop and helicopter resources for use in joint airmobile operations. Helicopters employed in the operations are organic to the military transport aviation regiments of the air army. Riflemen usually are drawn from the airborne or rifle divisions because of the minimum training necessary to prepare these units. On occasion, opposing forces have conducted operations employing infantry troops who have received extensive airmobile training. *It is anticipated that in the future opposing forces will make much greater use of airmobile assault during both day and night operations.*

Employment and Tactics of Airmobile Forces. The heliborne assault, often used in conjunction with paratroop operations, is becoming an important feature of the opposing forces concept of the high-speed offense. Opposing ground forces do not have the special helicopter assault troops comparable to their airborne division; rather, the helicopters carry troops from an airborne or motorized rifle division.

A typical helicopter assault would be conducted as follows: The objective is to seize and hold an important river crossing ahead of a rapidly-moving armored unit. The helicopter-borne troops (probably up to battalion size) are sent about 32 to 48 kilometers ahead of the advancing column. They are supported by artillery weapons which are within range. Strong fighter cover is provided when available. It would not be necessary to have complete control of airspace. They need only enough air control to move the helicopter-borne troops to their destination. A dozen heavy-lift helicopters plus 25 to 30 smaller troop carriers (HIP) would probably be sufficient to move an entire motorized rifle battalion of 440 men with trucks and 122mm guns.

Command and Control. When a division or Army commander desires to conduct an airmobile operation, his staff develops an airmobile operation plan. The division or Army operations officer and the air liaison staff officer, in coordination with the rest of the staff, develop the ground tactical and air assault portions of the plan, respectively. They determine the essential elements of the

plan including objectives, scheme of maneuver, fire support, the number and type of helicopters required, time and duration of the operation, troop requirements, attachments, assembly areas, landing zones, reconnaissance, and logistical support. This operation plan is then forwarded for review by higher headquarters. The decision to launch an airmobile operation is the responsibility of the FRONT commander who, on approval of the plan, will levy requirements for the necessary helicopters on the military transport aviation regiments of the air army.

During an operation, however, the lowest echelon capable of exercising control and coordination of the entire airmobile operation will have control of the aircraft. Forward air liaison officers are assigned permanently to regiments. They may be attached to battalions or companies as needed.

Section 7—Nuclear Operations

General

For the opposing forces nuclear weapons are an important modern means of combat. They are designed, however, to supplement rather than replace conventional weapons.

The opposing forces revolution in military affairs has not stopped with nuclear means but, rather, has spread uniformly to items of equipment ranging from small arms to communications, from command control and intelligence to aircraft and tanks. Moreover, advances in conventional means, e.g., precision-guided munitions as well as nuclear weapons, are causing further reassessments of operational doctrine and tactics.

Nuclear Weapons

The initial use of nuclear weapons is controlled by the Minister of Defense. Once nuclear weapons have been deployed, tactical nuclear weapons and their delivery systems are under the control of the FRONT commander. Delegation of control to subordinate commanders is rarely allowed and then only in special situations, such as during the exploitation phase of an offensive. Commanders who do not have an allocation of nuclear weapons or control of delivery systems request fires to support their missions from the next higher command.

The opposing forces have a family of nuclear weapons ranging from subkiloton to the megaton yields. These weapons can be delivered by conventional artillery, rockets, guided missiles, and aircraft. Surface-to-surface tactical ballistic missiles make up an integral part of the artillery plan.

Nuclear Weapons Employment

Main efforts are supported by nuclear fires. Nuclear weapons supplement, but do not replace, conventional weapons. They are employed for their mass and surprise effect with the massed fires of conventional weapons. The full effect of nuclear fire is realized by coordinating nuclear attacks with conventional fires and air attack, followed by immediate ground exploitation.

Tactical nuclear weapons can be delivered by aircraft of the tactical air army, by FRONT and army SCUD/SCALEBOARD brigades or the divisional FROG

battalions; large caliber guns are also nuclear capable. The principles governing the use of nuclear weapons are:

Surprise. The opposing forces put great importance on achieving surprise in the employment of nuclear weapons. Although the opening stages of an offensive are likely to be conventional, their nuclear delivery means will at all stages be surveyed in and targeted ready to make a strike. They will direct their intelligence means to identify the likelihood and timing of any US use of nuclear weapons and will attempt to preempt.

Mass Use. *The opposing forces concept for the most effective use of nuclear weapons is to deliver an initial massive nuclear strike before the main battle commences.* This is intended to shatter the opposition and greatly reduce opposing forces casualties and the time taken to advance through forward defenses. Subsequent strikes will be made on the first and second objectives in support of specific thrusts.

Priority Targets. Initially, these will be the nuclear delivery means of the US ground and air forces. The pattern of the initial mass strike will include sectors where the US ground forces will be the primary target to facilitate a rapid breakthrough. Command, control and communication centers, large supply installations, and large troop concentrations will also be priority targets.

Principles of Offensive Nuclear Operations

In a large-scale offensive, the principal uses of nuclear weapons are:

- Destruction of US nuclear weapon delivery means, including airbases that cannot be otherwise eliminated.
- Initial preparation.
- Reduction of US defenses or forces that may slow the offensive.
- Prevention and destruction of US counterattacks.
- Elimination of US troop concentrations and reserves.

The allocation of nuclear weapons varies with the strength of the US defenses and the scheme of maneuver. Normally, the largest allocation is for destruction of US tactical forces (usually the corps in contact), with the highest percentage being allocated to support the main effort.

Before the actual start of the preparation, only deep targets are attacked with nuclear fires to achieve surprise and to conceal the location of the main effort. Close-in targets usually are attacked last to achieve surprise as to the exact location of the main effort.

Principles of Defensive Nuclear Operations

In the defense nuclear fires are primarily used:

- To destroy US nuclear delivery means.
- In conjunction with the chemical fires, to break up the US offensive by inflicting severe damage or casualties to the main attacking group.

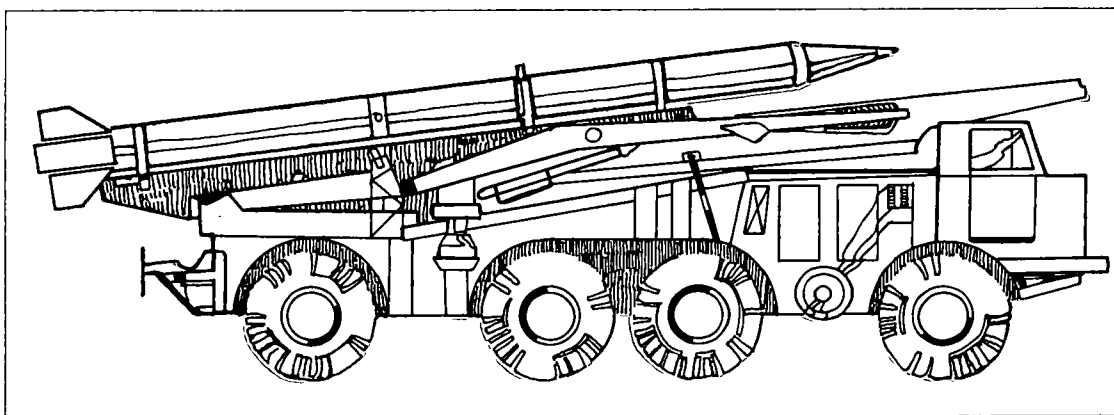
Consequent disruption of the US offensive might provide opposing forces the opportunity to seize the initiative and switch from defensive to offensive action.

- In counterpreparations.
- In support of counterattacks.
- To eliminate penetrations.
- To deny areas to the US force by use of surface bursts.

Divisional Free Rocket Over Ground (FROG) Battalion

Equipment. The FROG-3, FROG-4, and FROG-5 are three variants of a single rocket. The rockets are identical in appearance and differ only in the size and shape of their warheads. They are transported on and launched from the same basic light-tracked chassis derived from the PT-76 tank. The range of the rocket is approximately 35 kilometers, and the cruising range of the transporter is 260 kilometers. FROG-3, -4, -5 all have HE, nuclear, and chemical capabilities. This series is in the process of being replaced by the FROG-7.

The FROG-7 is the most recent in the free rocket series. The weapon is employed on a new transport-launch vehicle using a wheeled ZIL-135 chassis equipped with an on-board crane. A similar vehicle is used to transport the reserve rockets. The range of the rocket is approximately 70 kilometers, and the cruising range of the transport-launch vehicle is 500 kilometers. The weapon may be found in the FROG battalion of a division. The FROG-7 is capable of delivering HE, nuclear, or chemical warheads. Associated equipment is the END TRAY radar.



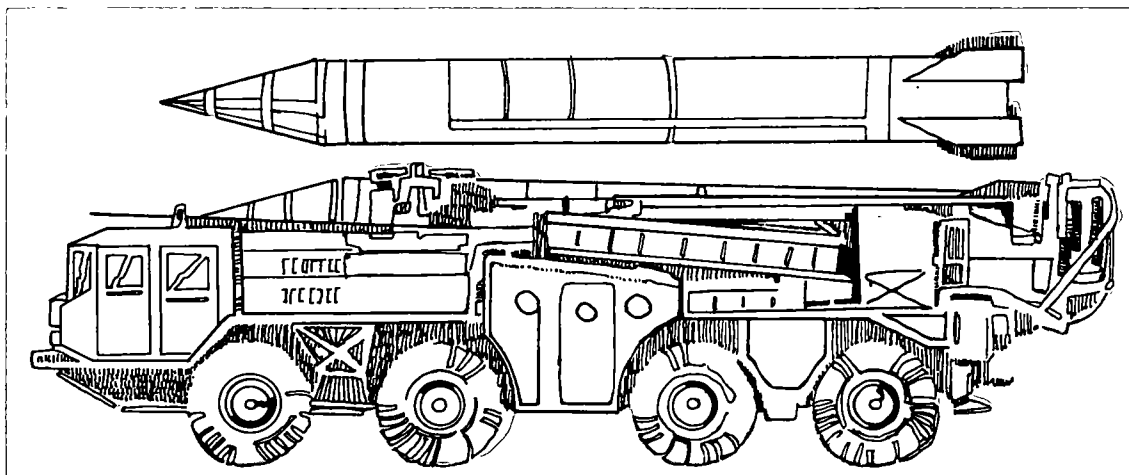
Organization. The battalion's four FROG-7 TEL's may be organized in four separate batteries or as two pairs.

Deployment. Although FROG-7 has a range of 15 to 70 kilometers, the divisional FROG battalion normally deploys well forward, an average of 8 to 15 kilometers from the line of contact during offensive operations.

Surface-To-Surface Missile SCUD Brigade

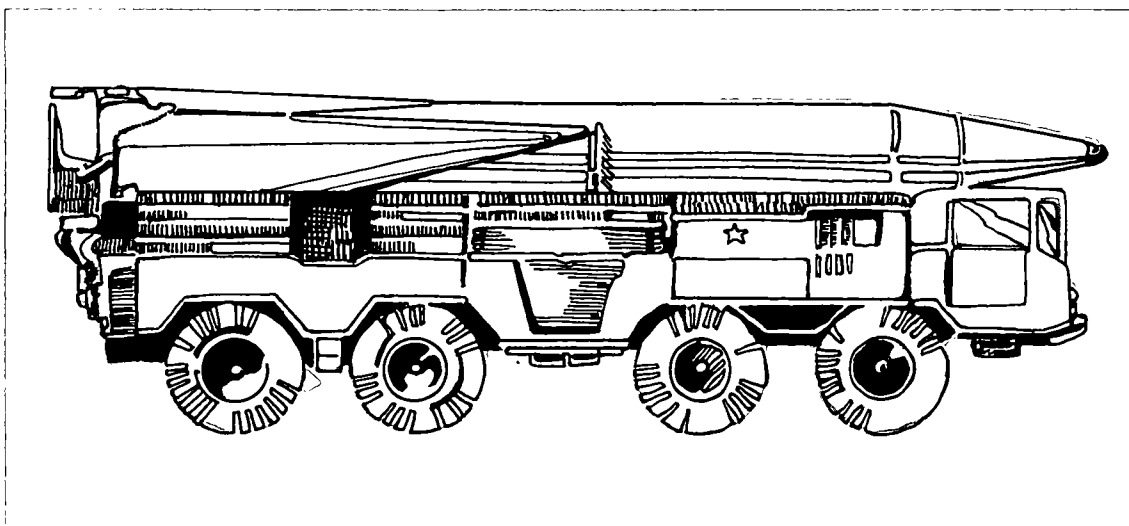
The SCUD brigade is found at FRONT, tank army, and CAA levels. In each brigade there are nine SCUD B SS-1c missiles, three in each of the three battalions.

The SCUD-series guided missiles are single-stage, short-range, ballistic missiles using storable liquid propellants. Although originally transported on the "Joseph Stalin" heavy tank chassis, the SCUD B has recently appeared on a new TEL based on the MAZ-543 truck. This transporter provides greater road mobility and reduces the number of support vehicles required while allowing a large selection of off-road firing positions. Maximum range is estimated at 280 kilometers. It can deliver HE, nuclear, and chemical warheads. Associated equipment is the END TRAY radar and a medium crane.



Surface-to-Surface Missile SCALEBOARD Brigade

The SCALEBOARD SS-12 missile is the largest and most powerful opposing forces surface-to-surface tactical missile. Its effective range is estimated at 800 kilometers, and its warhead is exclusively nuclear. Equipment associated with SCALEBOARD's are END TRAY radars, large cranes and pole trailers. Nine missiles are found in each missile brigade, three in each of three battalions. No further unclassified information is available on this weapon at present.



Section 8—Chemical, Biological, Flame, and Smoke Operations

Control of Chemical and Biological Weapons

Initially, the use of chemical and biological weapons is controlled by the Minister of Defense, but once chemical agents have been introduced, control of them is delegated to army level. Employment of biological agents is normally coordinated at FRONT or higher level. The use of smoke is controlled by divisions.

During a nonnuclear phase, the opposing forces would be less likely to initiate the use of chemical weapons against a US force capable of retaliation in kind or with an effective chemical defense capability. *If attacked with chemical weapons, the opposing forces would almost certainly retaliate in kind and, once nuclear weapons had been introduced, they could be expected to use tactical chemical weapons as a normal complement to nuclear weapons.*

Employment of Chemical Agents

When tactical nuclear weapons are employed, chemical weapons may be used as follow-up weapons. Emphasis is placed on bulk dissemination, principally from aircraft and also from munitions of simple design.

The opposing forces have a variety of means of chemical warhead delivery such as surface-to-surface missiles, rocket launchers, and guns of or above 122mm caliber. While chemical-filled missile warheads could be allocated at a scale similar to that for the nuclear warheads, it is unlikely that more than five percent of conventional artillery ammunition stocks would be chemical. The opposing ground forces are well trained and equipped for defense against chemical and biological attack.

Offensive Use of Chemical Weapons

Chemical operations in support of offensive operations are characterized by the following:

- Persistent agents are used to contaminate obstacles on roads and routes used by advancing or retreating US troops.
- The opposing forces will take high risks with chemical agents and will attack over terrain that they have recently contaminated.
- Concentrations of chemical agents are employed to exhaust US strength and reduce morale by forcing continuous wear of protective clothing and masks.

Chemical weapons are particularly suitable for targets where casualties to personnel are required, but where damage to the terrain should be minimized. Likely targets and the type of chemical agents used are:

- Nonpersistent agents.
- Defiles, river crossings and communication centers on main axis of attack.
- Airfields and dropping or landing zones prior to airborne assault.

- US positions close to opposing forces troops.
- Persistent agents.
- To restrict the use of ground.
- Airfields which the opposing forces do not wish to use in the near future.
- Ports, bases, and rear area installations.
- Nonpersistent or persistent agents.
- Nuclear weapons systems and artillery.
- Well dug in US positions.
- Headquarters, reserves, and assembly areas.
- Along the flight path of an airborne assault.

Defensive Use of Chemical Weapons

The opposing forces defensive use of chemical agents prescribes that chemical landmines are to be used to impede the advance of US forces and to complement the use of terrain obstacles. Repeated attacks and prolonged concentrations of chemical agents are employed against US personnel to produce casualties and force continuous wear of protective equipment. Obstacles are usually contaminated to delay clearing and impede advance.

Specialist chemical defense units, primarily responsible for decontamination, exist in all units down to regiment. Chemical and biological reconnaissance is mainly carried out by the regimental chemical defense platoon and chemical specialist elements of the divisional reconnaissance battalion. Ground and collective personnel and vehicle decontamination facilities are provided by divisional and higher echelon chemical defense units, although all combat and service units are well trained in protective and decontamination techniques. All opposing forces soldiers have a comprehensive array of personal protective equipment and are well practiced in its use. The employment of chemical weapons is simulated in many opposing forces exercises.

Chemical and biological defense is tailored to fit the nuclear battlefield. Ground troops are extensively trained in movement through areas of contamination and massive destruction. Vehicles and personnel are to be decontaminated on the march by mobile stations. Individual soldiers carry portable kits for treating small areas of contaminated skin or clothing. Chemical and biological defense units at regiment through FRONT level move along with the advance, providing mobile protection and decontamination facilities.

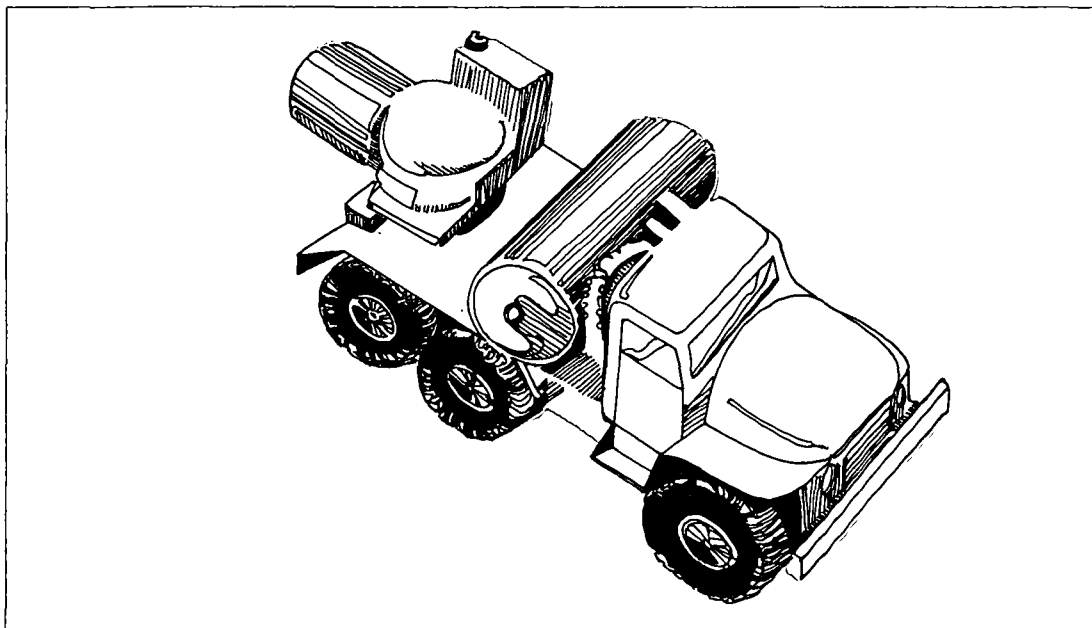
Chemical Units

Organization. The opposing ground forces provide organic CBR defense down to regiment level in all combat units. Chemical defense companies are assigned to tank, motorized rifle, and airborne regiments. There is a chemical battalion at division level, a chemical battalion at army level, and a chemical brigade at FRONT. Treatment of CBR casualties is handled by the medical services.

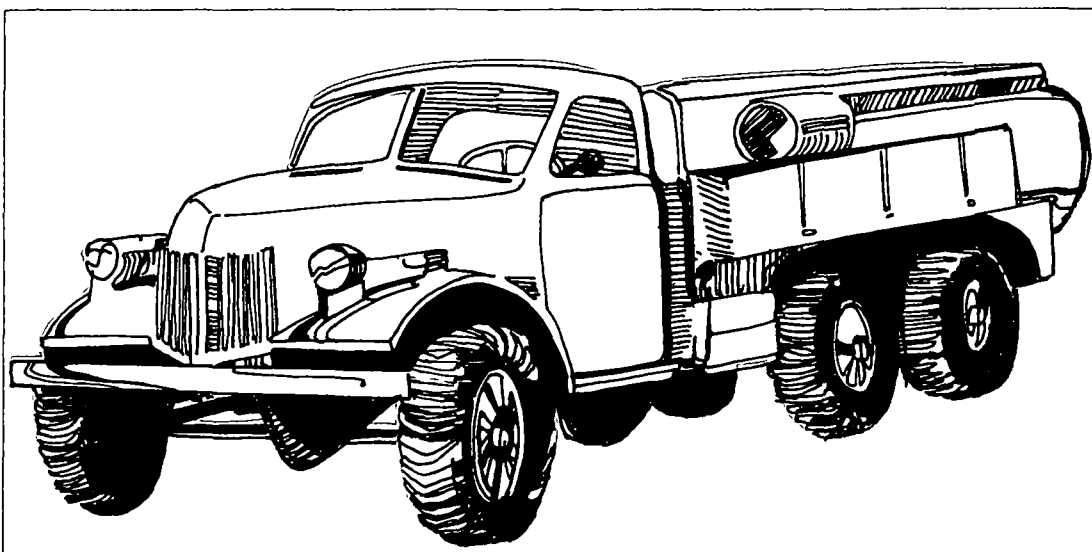
Equipment. Older opposing forces armored vehicles do not carry collective protection systems to furnish purified air to crew and passengers, so that personnel must carry protective masks for breathing, with portable detector kits being used to warn the crew of the presence of contamination. It is believed that

the opposing forces are adapting various forms of filtration systems for use in armored vehicles, and newer opposing forces tanks and AFV's have built-in systems.

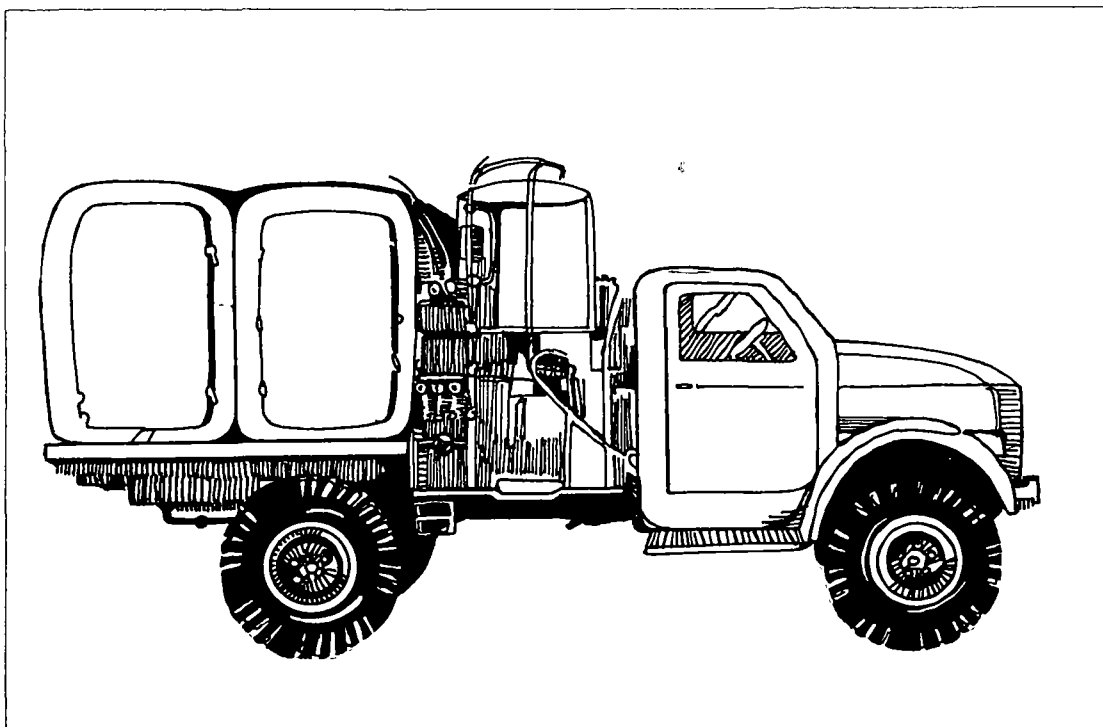
There are two basic types of truck-mounted mobile decontamination systems in service with the opposing ground forces. The newest system, the TMS-65, can decontaminate vehicles in the field by spraying decontaminating agents through a jet exhaust mounted on a swivel base on a truck chassis. A tank can be treated in about 3 minutes.



The ARS-12U truck-mounted decontamination system consists of a large tank on a truck chassis with hoses, brushes, and special-purpose nozzles. One filling of the 680-gallon tank can decontaminate about 12 tanks. The ARS-12U is the basic equipment for chemical defense battalions in motorized rifle and tank divisions. The newer ARS-14, with a larger tank on a heavier truck, is replacing the ARS-12U.



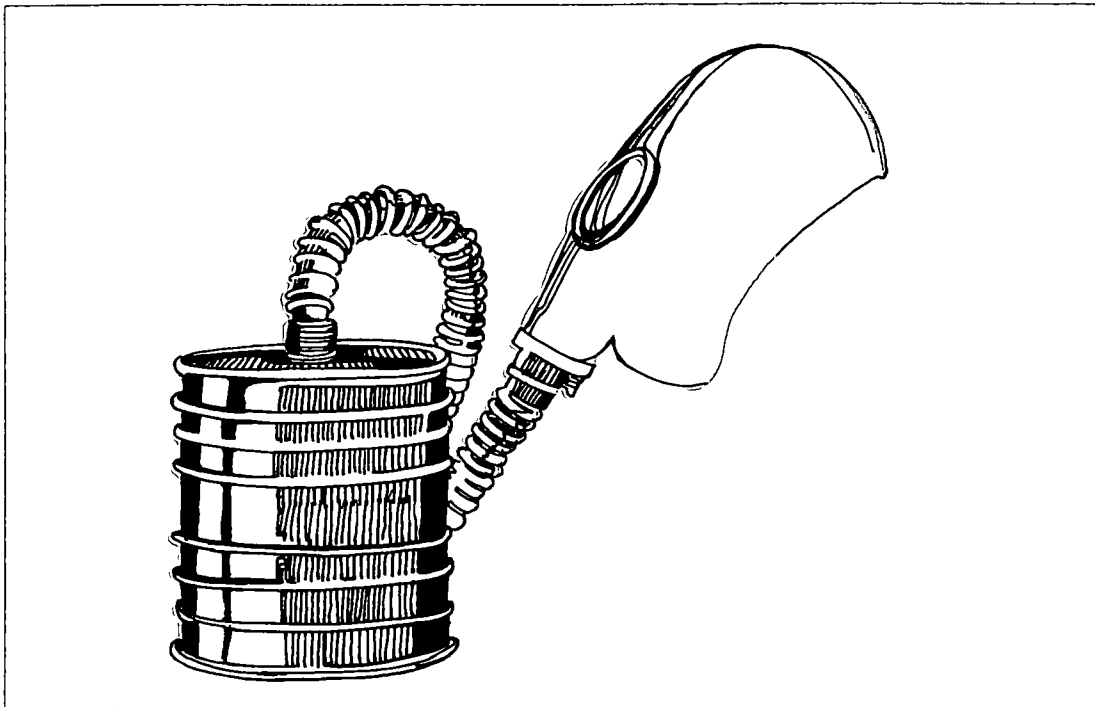
There are various types of steam-cleaning equipment, such as the truck-mounted DDA-53, for decontaminating clothing, small arms, and light equipment. Field showers can be set up for personnel. Hand-used equipment, such as the portable DKV, can be used with brushes and spray nozzles to clean vehicles or equipment. Hand-carried personal decontamination kits are provided for self-treatment in the field.



The standard portable VPKhR CBR detector set is carried with a shoulder strap and operated while worn. It can detect most conventional chemical agents as well as nerve agents. Automatic alarm systems mounted in modified reconnaissance vehicles, designated BRDM-rkh, are used in divisional reconnaissance battalions. The systems are vehicle-carried, since they are powered by large, heavy storage batteries, and are capable of detecting certain types of nerve agents, but not most conventional agents.

Opposing forces protective clothing is made from impermeable materials such as rubberized fabric, worn with permeable chemically treated clothing underneath. The opposing forces outfit is heavy and cumbersome, but provides complete protection when worn with a protective mask. Parts of the suit may be worn separately, thus providing less protection for short-term exposure.

The standard opposing forces mask (ShM) consists of a separate facepiece, hose, and canister. The strapless facepiece covers the entire head; it is uncomfortable in hot weather, and lacks voice transmitters, corrective lenses, and eating/drinking openings. The ShM does allow the wearer to change canisters rapidly, and the hose attachment contains a double-outlet valve to reduce leakage.



Biological Operations

The Biological Warfare Convention of 1972 prohibits the manufacture, stockpiling or weaponizing of biological agents. This prohibition, taken together with the instability and unpredictability of biological weapons and the availability of other more effective weapons of mass destruction, probably precludes the use of biological weapons by opposing forces. Furthermore, the prophylaxis provided by chemical warfare protection will suffice in the unlikely event biological weapons are used. If used, opposing forces biological operations would be designed to cause death or disability to US personnel, either directly by use of antipersonnel agents or indirectly by attacking their food and water supply.

Reconnaissance

Chemical, biological and radiological reconnaissance is organized by all levels of command to locate contaminated areas and their limits; determine the type and degree of contamination of given areas; and to locate detours around and/or the least contaminated routes through contaminated areas.

CBR reconnaissance, like other forms of reconnaissance, is a command responsibility. Commanders and their staffs, as well as specially trained troops, conduct CBR reconnaissance. At company level the company commander plans and executes CBR reconnaissance. At battalion level the chief of staff and the operations officer are responsible for CBR reconnaissance. At regiment and division level the chief of chemical services is the responsible staff officer who plans and coordinates CBR reconnaissance.

In the attack, the first echelon companies may provide a CBR patrol for the battalion. CBR reconnaissance is also conducted at all battalion OP's and at the commander's observation point.

Flame Operations

Portable flamethrowers are employed with assaulting elements to assist in the capture of strongpoints and pillboxes and to repel counterattacks. Mechanized flamethrowers in offensive operations are used to reinforce elements leading the main assault and to operate against reserves during the exploitation phase following a breakthrough in close coordination with tank weapons.

Static flame weapons are employed primarily in defensive operations. They are set out along suspected routes of US troop advance or in front of opposing forces positions. They are fired by remote control, timing devices, or pressure devices. Mechanized flamethrowers are used defensively to ambush advancing detachments and to support tank and motorized rifle units.

Smoke Operations

Tactical Doctrine. The opposing forces employ smoke for the following purposes:

- Camouflage targets to prevent air raids and intelligence missions.
- Hide infantry movements and changing locations of armored troops prior to an offensive.
- Obscure crossings of rivers and waterways.
- Point protection against infrared surveillance and ranging devices and against infrared terminal seekers.
- Degrade effectiveness of ATGM systems.

Artillery. Of the opposing forces artillery normally deployed, only the 122mm howitzer and the 130mm field gun have a smoke round. A smoke round is also available for the 100mm antitank gun and the 82mm and 120mm mortars.

Smoke Generator Units. There is no evidence of such configurations in the opposing forces army. However, smoke generators are still found in their inventory. Also, opposing ground forces have smoke barrels, pots, and grenades.

Smoke Generating Equipment in Vehicles.

- The T-55, T-62, PT-76 tanks and the BMP have organic smoke generating equipment.
- The following vehicles probably have organic smoke generating equipment: T-54 and T-72 tanks, BTR-50P AFV, the ASU-85 assault gun, and the BMD.
- Older models of the T-54 use burning pot-type smoke.
- The T-55 system consists of a pump and electric motor, safety valve, nozzles, and tubes. Diesel fuel is sucked from the vehicle fuel tank at the rate of 10 liters/minute and sprayed under pressure into the exhaust manifold. The system can operate for approximately 10 minutes. It cannot operate when the exhaust system is rigged for snorkeling.

Section 9—Engineer Support

General

The chief function of engineer units is to help combat units keep up the speed of an advance by facilitating movement across or around obstacles. The most important specialized operation is the assault river crossing. Support in camouflaging positions is also provided by engineers during defensive operations.

Support in Offensive Operations

Much of the speed and shock of offensive operations is the result of engineer efforts. Engineer support is well forward, and priority is given to the reduction of obstacles for maneuver units and flank security against armor threats. Secondary emphasis is given to engineer support in rear areas for logistical operations. Support is tailored to the needs of the operation. Engineer support is given in reconnoitering roads, bridges, and river-crossing sites, plus clearing passages through minefields and other obstacles.

Support in Defensive Operations

Defensive operations are characterized by the extensive use of prepared positions and large-scale employment of mines and other obstacles. A planned antitank defense is basic doctrine. The primary mission of the engineers in the defense is to assist the combat elements in preparing defensive works, supervise and assist in maintaining the mobility of the reserves.

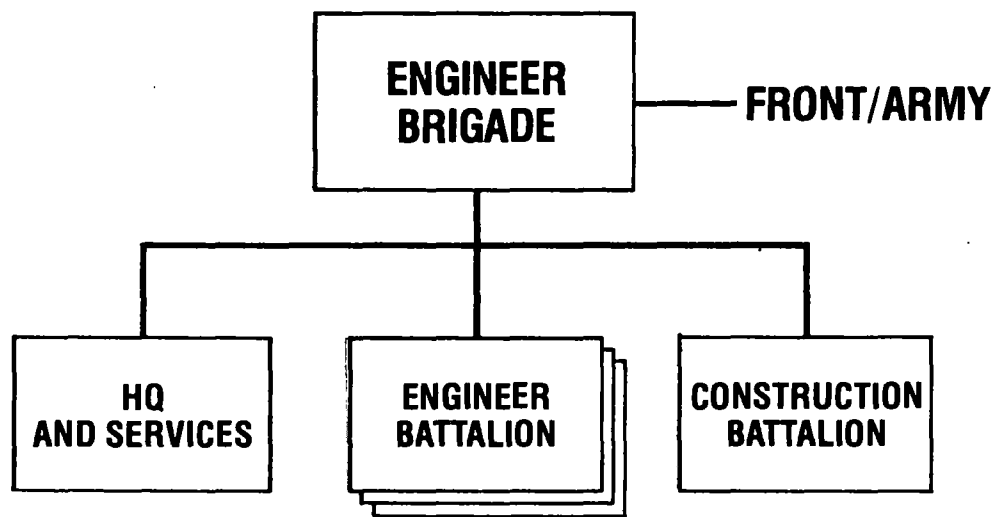
Engineer troops are assigned down through regimental level in all divisions, and platoons are sometimes detailed to battalions for specific operations. Motorized rifle divisions and tank divisions have engineer battalions, but the tank divisions have a larger number of heavy amphibious ferries to support the divisions' armored vehicles. Airborne divisions have an engineer battalion of lesser strength and none of the heavy vehicle-launched bridging equipment, ferries, or ponton bridge sections.

Regimental Engineer Company. All opposing forces troops are trained in simple field engineering tasks such as field defense and mine clearance. For immediate engineer support, however, motorized rifle and tank regiments rely on their organic engineer company which is equipped to carry out engineer reconnaissance, route opening, digging, camouflage, limited mine warfare tasks, demolitions, and water supply. These jobs are done by "sappers" as opposed to "engineers" who carry out specialized work such as the construction and operation of floating bridges and ferries. The regimental engineer company has a TMM truck-launched bridge.

Divisional Engineer Battalion. The divisional engineer battalion has a wide variety of equipment, to include a PMP heavy folding ponton bridge, six GSP amphibious ferries, and additional equipment for laying and breaching minefields.

Army and FRONT Level. Further engineer support together with large quantities of bridging and ferry equipment are available at army and FRONT. There is no shortage of gap-crossing equipment, and the main problem likely to be

encountered is its movement forward to the required site amidst the many other vehicles on the road.



Engineer Reconnaissance. Engineers are included in all reconnaissance elements, their support being essential to the mobility of the tank and motorized rifle troops. They provide advice on routes forward, waiting areas and diversions, warning of minefields and craters, and are able to carry out early reconnaissance of water obstacles to find tank deep-wading sites and suitable entry and exit points for amphibious AFV's. An engineer reconnaissance patrol may consist of one or two BRDM scout cars or AFV's, usually commanded by an officer. For reconnaissance of a tank deep-wading site an engineer reconnaissance patrol will use divers (perhaps two pairs per site) and a PTS-M amphibian with river reconnaissance (depth and profile) devices. Engineer reconnaissance of river-crossing sites takes about 1 hour. An engineer reconnaissance patrol is equipped with portable mine detectors and route-marking flags. It may be allocated a DIM mine detector, mounted on a UAZ-69 jeep, for mine reconnaissance of roads and tracks at speeds up to 10 kmph. Engineer reconnaissance observation posts (EOP's) may consist of about three sappers equipped with periscopes and range-finding equipment.

Route Opening Detachments. To insure a rapid rate of advance by the main body, routes forward are opened up as soon as possible, and groups known as route opening detachments (ROD's) are formed. The ROD's are of platoon to company strength and may comprise vehicles suitable for route clearance in a nuclear environment. A ROD will often include tank or truck-mounted short-gap bridging equipment, vehicle-mounted mine detectors, and sappers for mine clearance. Explosives, bangalore torpedoes, markers, and tracking will be carried. ROD's can fill craters, clear mines, prepare short bypasses of major obstructions, and identify contaminated areas.

During a tactical march ROD's move up to 2 hours ahead of the main body, clearing obstructions reported by divisional reconnaissance. The size and composition of the ROD are adjusted to suit operational needs and availability. The

divisional engineer battalion cannot provide more than two or three ROD's which are employed on the main routes, where possible, under the protection of an advanced guard or forward detachment. On other routes the leading regiments have to provide ROD's from their own engineer resources, and these are consequently limited in size and capability. ROD's are protected by a platoon of infantry or tanks and should be accompanied by chemical reconnaissance personnel moving in a specially equipped scout car (BRDM-rkh).

When leading units move into prebattle formation, the ROD's will normally drop back behind the deployed advance guard. They will assist in preparing cross-country routes for the main body between the line of deployment into prebattle formation and the assault line. During battle, ROD's will move behind first-echelon regiments and may prepare routes for the commitment of second-echelon units.

Assault River Crossing

General. Opposing forces AFV's are capable of crossing a water obstacle with minimal engineer support. All the latest opposing forces AFV's are amphibious, as are the BRDM scout car variants and the PT-76 light reconnaissance tank. Medium tanks can snorkel to a depth of 5.5 meters, but the preparation of entry and exit points and detailed reconnaissance of the riverbed are limitations. A highly mobile range of amphibians, ferries, and bridging equipment is available for the artillery and logistics support which must follow the AFV's over water obstacles.

Regiment and Division River-Crossing Equipment. At regiment level, a TMM truck-mounted scissors bridge can span gaps of up to 40 meters. The four-section bridge, ideal for canal crossings where entry and exit points cause problems for all AFV's, can be launched in about 30 minutes. At division level a larger range of bridging, ferrying, and amphibious equipment is available.

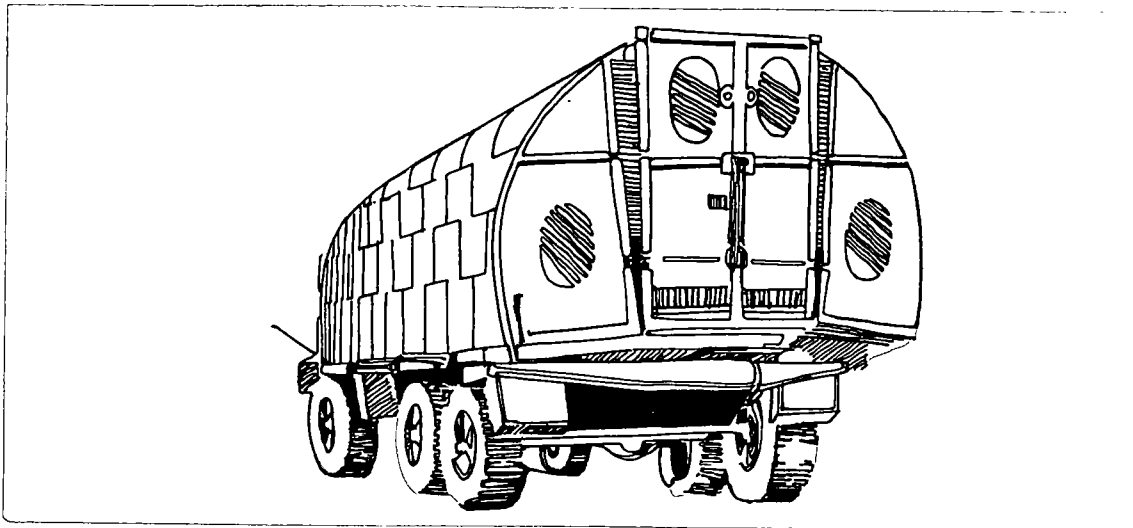
Ponton Bridges. Each division has a complete PMP "ribbon bridge" in its engineer battalion and will often be allocated an additional bridge from higher formation resources, enabling it to undertake the crossing of two major water obstacles in 1 day. Ponton bridge elements will always move well forward, often immediately behind a forward detachment or with an advanced guard. A desirable bridging site is considered to have:

- A narrow river section, without sandbanks, shallows or currents in excess of 2 meters per second.
- Concealed approaches on adequate access routes.
- Firm and gently sloping banks.

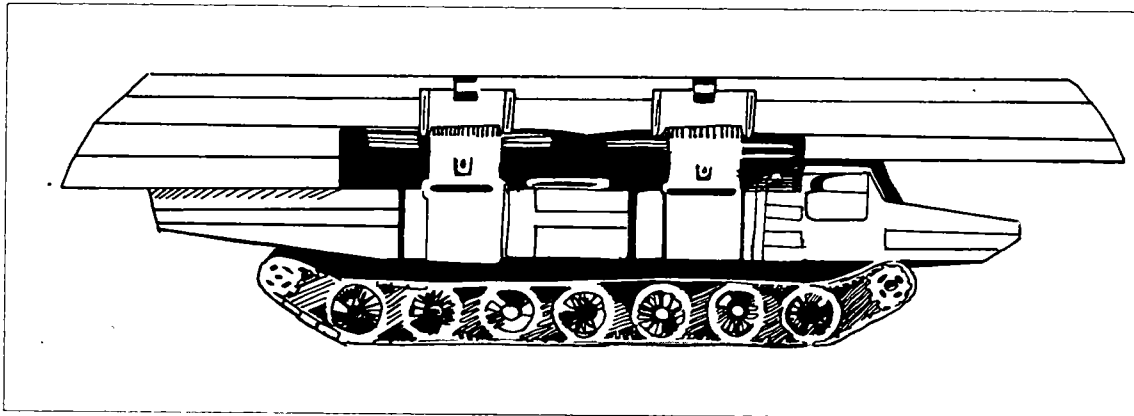
The bridge should be laid as soon as the first assault echelon has secured the far bank and freed the bridging site from direct enemy fire. Access and exit lanes are marked with red and white cones and chevron boards by the regulators.

Ferries

PMP. Two to five PMP pontons can be linked together to form a ferry propelled by a motor launch.



GSP, a heavy amphibious ferry, can be built in 5 minutes by linking two amphibious sections together. This produces a ferry with hydraulically operated ramps which can use unprepared ferry sites.



Engineer preparation of crossing sites.

- Explosives, mineplows, and dozers are used to clear lanes through mines and obstacles on the banks and in the water. Manual clearance may also be required. Cleared lanes through water obstacles are marked with painted buoys or floating stakes (red upstream and white downstream).
- Steeply sloping banks will require preparation of entrance and exit points using explosives and dozers.
- The approaches to a water obstacle are likely to require considerable engineer preparation, especially when swampy meadows and minor water channels must be crossed. Separate routes may be prepared for wheels and tracks. Crossing sites will often be chosen near bridges and ferries, even when these have been destroyed, so that existing roads and tracks may be used.

Mine Warfare

Minefield Breaching. The normal opposing forces method of breaching minefields during an assault or rapid advance is to use mineplows fitted to leading tanks. Whether the assault echelon is predominantly tank or motorized rifle,

tanks with mineplows will always lead to carry out the breaching operation. There will normally be one mineplow per platoon of three to four tanks.

Lanes. Lane development requires one engineer section per lane. The number of lanes to be cleared depends on the terrain and the number of columns in the assault echelon. An average of four to six lanes will be cleared, of which at least two will be developed into permanent lanes 6 to 8 meters wide for the passage of artillery and logistic vehicles.

Minefield Marking. Sappers are responsible for marking minefield lanes, providing traffic control on them, and for marking the routes leading from the start line to each lane. Lanes are marked with red triangular metal flags, black and white tapes and illuminated markers at night. A gap in their own minefield is marked by the opposing forces with signs in various shapes (circular, triangular or square) placed not less than 20 meters apart on both sides of the gap. They are not visible from the US side of the gap.

Explosive Breaching. One sapper section for each permanent lane required will move forward by AFV immediately after the mineplow tanks and will lay explosive charges by hand. Their movements are often under cover of a smoke screen and supporting fire from tanks and AFV's. A time-saving alternative is for a leading tank to tow an explosive charge across the minefield. A new mine-clearing device, based on the BTR-50 PK AFV, is currently found in the divisional engineer battalion, three in each battalion. It projects an explosive hose across the minefield which is detonated to form a lane 180 meters long by 6 to 8 meters wide for immediate use by infantry in AFV's.

Manual Clearing. Manual clearing is carried out in the following circumstances:

- Sappers supporting a ROD will clear nuisance minefields from routes, especially around craters and demolitions, to enable the route-clearing equipment to operate.
- Approaches to water obstacles may have to be cleared manually with troop labor.
- Manual clearance may be ordered to maintain surprise, especially at night or when the opposing forces wish to make a gap in their own minefields.

Minelaying. Minefield laying is most rapidly done using one or more of the three armored tracked minelayers organic to each divisional engineer battalion. In the attack MOD's have the task of rapid minelaying in the likely paths of counterattacks. MOD's are positioned on the flanks of the march column so as to be ready for rapid action and are usually closely associated with the antitank reserve. These teams consist of up to three armored tracked minelayers or minelaying trailers and two or three logistic vehicles carrying mines. Minelaying helicopters, which dispense mines from a chute while flying at a height of about 5 meters, may also be employed.

Three minelaying vehicles will normally move parallel to each other 10 to 30 meters apart, dispensing antitank mines every 4 to 5.5 meters. Antitank minefield density is from 500 to 1,000 mines per kilometer.

Antipersonnel minefields usually consist of four rows of mines, with 2 to 4 meters between rows and 1 to 2 meters between mines.

While the opposing forces make extensive use of mines in all operations, particular emphasis is placed on their use in the defense. Antitank minefields are placed across likely tank approaches forward of defensive positions and in gaps. Minefields are also placed across approaches into areas occupied by artillery elements. Controlled mines are placed in gaps in the minefields to facilitate movement by friendly units.

Section 10—Tactical Communications

General

Opposing forces place great dependence on radio and wire communications. Foot, motorcycle, and helicopter messenger services are used as a backup when these cannot operate properly or when there is a need for a higher degree of security. Pyrotechnics, to include flares and smoke, are also used for communications in combat areas.

Surprise and security are achieved through very strict communications discipline, keeping radio transmissions to an absolute minimum. Cooperation is provided through interlinking command and control networks. Reconnaissance effectiveness depends on accurate and rapid reporting. Firepower accuracy and effectiveness are guaranteed only through the completeness of target acquisition and reporting. Maneuver requires that orders from command posts to fast-moving strike forces reach them without delay.

Organization

Signal troops are organic at platoon strength to motorized rifle and airborne battalions. A signal company is organic to motorized rifle, tank, and parachute regiments, and a signal battalion is organic to divisions. Divisional signal battalions include a headquarters and service company, a wire company, a command post company, and a radio company.

At FRONT, army, and division levels, respective commanders delegate communications authority to chiefs of staff. At regiment and below, this authority falls to deputy commanders. At every level, unit signal officers are finally charged with maintaining continuous communications throughout an operation.

Opposing forces standing procedures provide only for certain basic communications principles, insisting that implementation of these be left to the judgment of the commander. There are no hard and fast rules for the organization of opposing forces communications.

Principles of Communications

Responsibility for command communications is from higher to subordinate headquarters; however, if communications are not established by the higher

headquarters, the subordinate headquarters must provide them, using its own equipment.

Communications with supporting units are the responsibility of the headquarters of these support units.

Lateral communications are normally established from right to left, but if the unit on the right fails to establish them, the unit on the left must do so.

Radio is the principal means of communications, but messengers and other liaison services are always used for augmentation and security.

Wire is used extensively only in the defense, or in the preparatory phase of offensive operations, and when time and the situation permit.

Operator discipline is strict, operating procedure is of a high order, and security precautions are observed minutely.

Command nets are designed to provide communications with subordinate units two echelons down, in a "skip echelon" manner so that FRONT can assume control of a division, or army can assume control of a regiment, or division can assume control of a battalion, should the situation require.

Communications Equipment

General. Opposing forces communications equipment ranges from simple, easy-to-operate electronic devices to complex vehicular-mounted equipment that requires the skill of well-trained operators.

Radio and Radio Relay. Radio is the principal means of communications except in static situations where wire can be efficiently employed. Opposing forces radios consist of lightweight, manpack sets; mobile, vehicular-mounted radios; and transportable radio-relay systems. Their radios are of rigid construction, simple to operate, and overlap in tuning ranges for intercommunications among infantry, armor, artillery, and other tactical units. Principal deficiencies in opposing forces radio communications include spectrum congestion, marginal or inadequate ranges to support fast-moving combat forces, and inherent vulnerabilities to ECM.

Wire. Whenever it is practicable to use wire systems, the opposing forces employ field switchboards, telephones, teleprinters, low-capacity carrier equipment, and several types of field cable and wire.

- Telephone switchboards are used at all company/battery and higher echelons.
- Standardized opposing ground forces field telephones are used in connection with automatic switching and rebroadcasting techniques at all levels.
- Teleprinter communications are provided down to regimental level.
- Carrier equipment is available in a variety of channeling arrangements such as one-voice, one-voice and one-telegraph, two-voice, three-voice, and six-channel telegraphy. Carrier elements are usable on either wire or radio relay.

- Opposing forces cable and wire are evidently conventional with respect to capability. These range from single-conductor field wire to two-pair (four conductors), rubber-covered field cable. A variety of cable and wire drums, both manpack and vehicular mounted, and cable-laying devices is available for the installation of wire circuits.

Types of Radio Nets

There are basically four types of radio nets employed by the opposing forces.

Command nets are used by the commander for command and control of subordinate units. These nets provide direct communications between commanders.

Liaison nets are employed between adjacent ground force units to coordinate operations. These nets are also established by supporting units to supported units. Each liaison office provides the equipment to communicate with its parent unit.

Logistical/administrative nets are employed by rear service elements for the control of combat service support activities.

Staff nets are used primarily by the chief of staff for directing other staff elements and keeping subordinate and superior staffs informed of the commander's intentions. These circuits also facilitate receipt and transmission of warning orders, situation reports, and combat intelligence. In addition, the chief of artillery uses these nets at FRONT headquarters, combined arms headquarters, and at division headquarters level to pass staff communications to lower echelons.

Tactical Communication Doctrine

In the offense, radio is considered the most practical means to insure viable communications in a fast-moving operation. Prior to the attack, radio silence is usually observed, with wire and messenger service relied upon for communicating. The only exception to this rule is that reconnaissance and warning nets do operate. Once the attack is launched, radio communication is used to the maximum, with wire used in a standby role as well as in the rear areas. As the forward elements continue to penetrate the US defense, the second echelon and reserves that are moving forward tie into the wire axis. Once committed to exploitation and pursuit roles, they conduct all communications using radio, with wire used to communicate with mopup elements. If it appears that consolidation of the new positions is necessary, opposing forces again shift to wire communications.

In the defense, wire is considered the primary means of communications. A wire net is established with the main axis in the direction of the anticipated hostile main attack and the path of the anticipated, inevitable counterattack. The only radio communications permitted during these static situations are for reconnaissance and warning nets and for air defense artillery fire control. Once the US attack is launched, radio traffic is permitted. Radio will then become the primary means of communication until the attack is stalled, and a counterattack is launched to restore the defensive positions. Wire is still relied on for communication with rear areas.

Communications Security

Considerable emphasis is placed on security of all forms of communications. *The opposing ground forces maintain exceptionally strict radio discipline; only the most essential information is passed over the air.* Whenever possible, wire communications are employed. Radio stations are generally set up some distance from the actual command post, so that US direction finders cannot pinpoint the command posts.

Communications security practices used in tactical organizations include the following:

- Emphasizing strict transmission discipline by monitoring opposing forces transmissions at random.
- Changing frequencies as often as possible.
- Changing call signs and code names on a frequent and irregular basis.
- Restricting the output power to the minimum necessary depending on the particular situation or environment.
- Restricting the number of personnel having access to or operating communications equipment.
- Restricting the availability of communications equipment.

Section 11—Tactical Command and Control

Organization of Headquarters

The main sections of an opposing force FRONT and army headquarters are:

General Staff. This is controlled by a chief of staff who is responsible for operational direction of the formations in accordance with the commander's plan. The general staff includes groups responsible for operations, intelligence, ciphers, training, air defense, survey, and personnel.

Political Directorate. This directorate is responsible for insuring the political "education" of all ranks. Although political interference in military decisions has decreased in recent years, the political adviser still has considerable influence on the policy and work of the formation. The directorate is also responsible for culture, education, and press matters.

Arms Directorates. There are directorates for armored, artillery, air defense, engineer, signal, and chemical troops. Each is responsible for the technical aspects of its own arm and for carrying out the commander's operational requirements as applied to itself. The senior officer of each arm is also an adviser with direct access to the commander.

Tank Armament Directorate and Artillery Weapons and Ammunition Directorate. These directorates form part of the supply organization and are responsible for the procurement and supply of technical equipment. The engineer, signal and chemical troops directorate carry out a similar role for their arms.

Logistic Staff. This section is responsible for coordinating the work of the rear services and for liaison between other directorates and the supply organization.

The organization of the divisional headquarters is similar to that of an army headquarters, but about one third as large.

Formation Commanders

An opposing forces commander at all levels has overall responsibility for his force. It is considered desirable that a formation commander should be freed, as far as possible, from matters not directly concerned with battle so that he may have sufficient time to study the operational situation.

FRONT Commander. The FRONT commander is concerned with the conduct of the entire operation in which his FRONT is involved and with consideration of the long-term strategic plan. He may be responsible for controlling operations throughout a theater.

Army Commander. The army commander receives his tasks from FRONT. His primary concern is the conduct of operations over a 4- or 5-day period, and he is not usually required to carry out long-term planning.

Divisional Commander. The divisional commander is primarily concerned with the day-to-day situation as it concerns his formation and less with the future development of the battle. This also applies to regimental commanders.

Location and Movement of Headquarters

In each opposing forces headquarters, control is exercised by the establishment of a series of command posts. The distance between them is planned to be such that more than one cannot be put out of action by a single nuclear explosion of medium yield.

The formation commander will decide where the command posts are to be set up and the axis on which they will move. The distance of the headquarters from first-echelon units will depend upon the formation and the tactical situation. FRONT and army headquarters will generally be sited in depth to maintain control of the entire FRONT/army areas. Divisional and regimental headquarters will, however, be located well forward to maintain control of the battle. The divisional forward command post, when deployed, will usually move immediately behind first-echelon battalions.

On a lengthy move, the command posts may leapfrog forward along different routes. They will be preceded by small reconnaissance parties which select the new locations and guide the headquarters vehicles to them. While on the move, command posts maintain continuous radio contact with subordinate units and formation headquarters and flanking troops. Normally, the alternate command post moves behind the main command post in readiness to take over control if required.

At halts command posts will be dispersed in protected localities and well camouflaged. Radio stations and special vehicles will be located some distance from the actual posts.

All headquarters have an administrative element which provides a defense unit and traffic control. Nevertheless, the dispersion of the headquarters places a strain on these units, and posts may at times be responsible for their own local defense. Air defense of headquarters receives a high priority.

Orders and Instructions

The means by which a commander controls his troops will depend upon his own personality and methods. *The opposing forces emphasize the need for firmness, quick decision, and flexibility.* Commanders must make full use of their staff's knowledge and experience, while retaining for themselves the final responsibility of decision. Opposing forces commanders place great emphasis on thorough planning and preparation and the issuance of detailed and precise instructions. Additionally, comprehensive field regulations cover all aspects of operations. As a result, flexibility of action on the part of subordinate leaders is in fact often restrictive.

After assessing a situation a commander briefs his chief of staff on the following:

- Plan of operation, axis, and grouping.
- Targets for nuclear, chemical, and conventional warheads and priority of firing.
- Battle tasks for units/formations.
- Organization for control.

The chief of staff will prepare a battle order to include:

- | | |
|---|--------------------------------|
| • An appreciation of the opponent. | • Timings. |
| • The plan. | • Deployment of control posts. |
| • Boundaries, tasks of flanking formations. | |
| • Tasks for units, missile troops, etc. | |
| • Air defense plan. | |

During the course of the battle, these orders may be supplemented by battle instructions containing additional and subsequent tasks, etc. At divisional and lower levels battle orders and instructions are commonly issued verbally; written confirmatory notes and traces or marked maps may be issued subsequently.

Future Trends

The opposing forces consider that their headquarters, especially at FRONT and army, are still too large for rapid movement. It is expected that these will be further streamlined, by economies in personnel and vehicles and the introduction of more automated equipment, to enable them to react more quickly to the rapidly changing battle situation.



Chapter 15

COMBAT SERVICE SUPPORT OPERATIONS

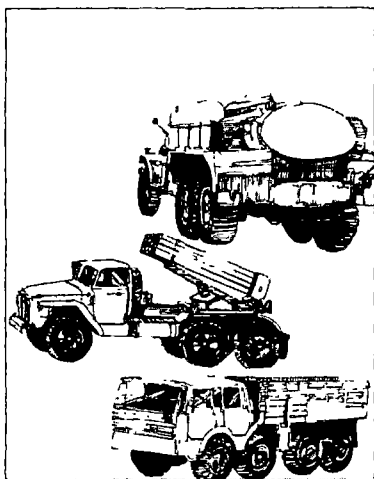


TABLE OF CONTENTS

Section 1

General	15-1
Principles of Logistical Support ..	15-2

Section 2

Field Support	15-2
General	15-2
Flow of Supplies Within the FRONT	15-4
Logistical Support in the Offense	15-5
Petroleum, Oils, and Lubricants Supply	15-5
General Purpose Transportation and Combat Vehicles	15-6
Specialized Equipment	15-6

Section 3

Field Maintenance	15-6
-------------------------	------

Section 4

Medical Support	15-7
General	15-7
Organization	15-7
Evacuation Procedures	15-7
Equipment	15-8
Personnel	15-8

Section 1—General

General

The development of mechanized warfare has required major advancements in battlefield logistics. Vehicles require maintenance, spare parts, repair, and fuel; new weapons need new types of ammunition requiring special handling; casualties need medical attention; troops must eat; an offensive can only advance as fast as fuel can be brought up to the vehicles.

The opposing forces logistical system in recent years has concentrated on increasing self-sufficiency of combat units and subunits, speeding up and increasing the capacity of transport facilities, minimizing maintenance and repair problems by means of standardization, and improving efficiency of delivery to subunits through greater coordination of service and combat units.

Opposing forces production of military equipment has emphasized increased standardization of parts for easy repair and maintenance. For example, the PT-76 light tank chassis serves as the base for a variety of armored vehicles and missile carriers, and the T-54/55 tank chassis is used for bulldozers, bridge layers, and other vehicles. The concepts hold for small arms, such as the variants on the basic AK model assault rifle. Small arms ammunition can be used in several different types of rifles and machineguns. The opposing forces have always preferred an evolutionary approach to the development of new weapons, preferring to develop new variations of an older reliable weapon rather than to throw away old equipment in favor of completely new types. Also, the opposing forces rarely discard outdated equipment. ***Obsolescent equipment is stockpiled in strategic reserves, and the policy of standardization of parts means that many of these older weapons can be cannibalized for repair of newer ones.*** The net result of standardization is easier field repair and maintenance using standardized spare parts and techniques.

Principles of Logistical Support

Centralized Planning. Centralized planning of resources is maintained at all levels by the chief of the rear to achieve economy and flexibility.

Standardization. Within operational limitations, considerable effort is made to standardize equipment to simplify maintenance, repair, and the supply of spare parts. This has been in evidence concerning tanks, artillery, and transport, particularly fuels, automotive parts, and communications systems.

Priorities. The priorities for resupply are:

- Ammunition.
- POL.
- Technical parts.
- Rations.

These priorities are rigidly adhered to.

Forward Distribution. *Higher formations are responsible for delivery of supplies to lower formations using their organic transportation.*

The Use of All Available Transport. As an example, helicopters are used whenever possible for transporting missile warheads forward.

Captured Stocks. Maximum use is made of captured stocks, particularly POL, although the logistics in operations planning are unlikely to depend on doing so.

Holding Stocks Well Forward. Large stocks of all types are held well forward. In particular, stocks of POL are held as far forward as possible so that formations can attack from the line of march with fuel tanks full.

Section 2—Field Support

General

Installations generally are well dispersed, camouflaged, and away from likely nuclear targets. Supplies are placed underground or dug in whenever possible. Rear service personnel prepare plans for damage control. Firefighting and decontamination are emphasized in damage control planning.

FRONT Supply Base. This base is usually located near rail junctions because of the importance of rail transport at this stage of the supply system. It is usually about 150 to 200 kilometers from the rear boundary of subordinate armies, depending on the tactical situation and available rail facilities. This base is generally an extensive complex made up of branch depots for each of the services. The FRONT supply base also contains medical installations, workshops, and maintenance units. The base commander is responsible for the administration of the base and is directly subordinate to the FRONT chief of the rear. Fuel and ammunition are well separated from other stores.

Army Supply Base.

- The army supply base is similar to that of FRONT but is smaller. It is also located near rail lines, if possible, and consists of appropriate branch depots. The distance behind the main battle area is generally about 100 kilometers. Bulk fuels are broken down into drums and cans at this level.
- The army usually establishes forward supply points near the army forward boundary of the rear area (immediately behind its first-echelon divisions), generally on the basis of one for each first-echelon division. The base commander is subordinate to the army chief of the rear.

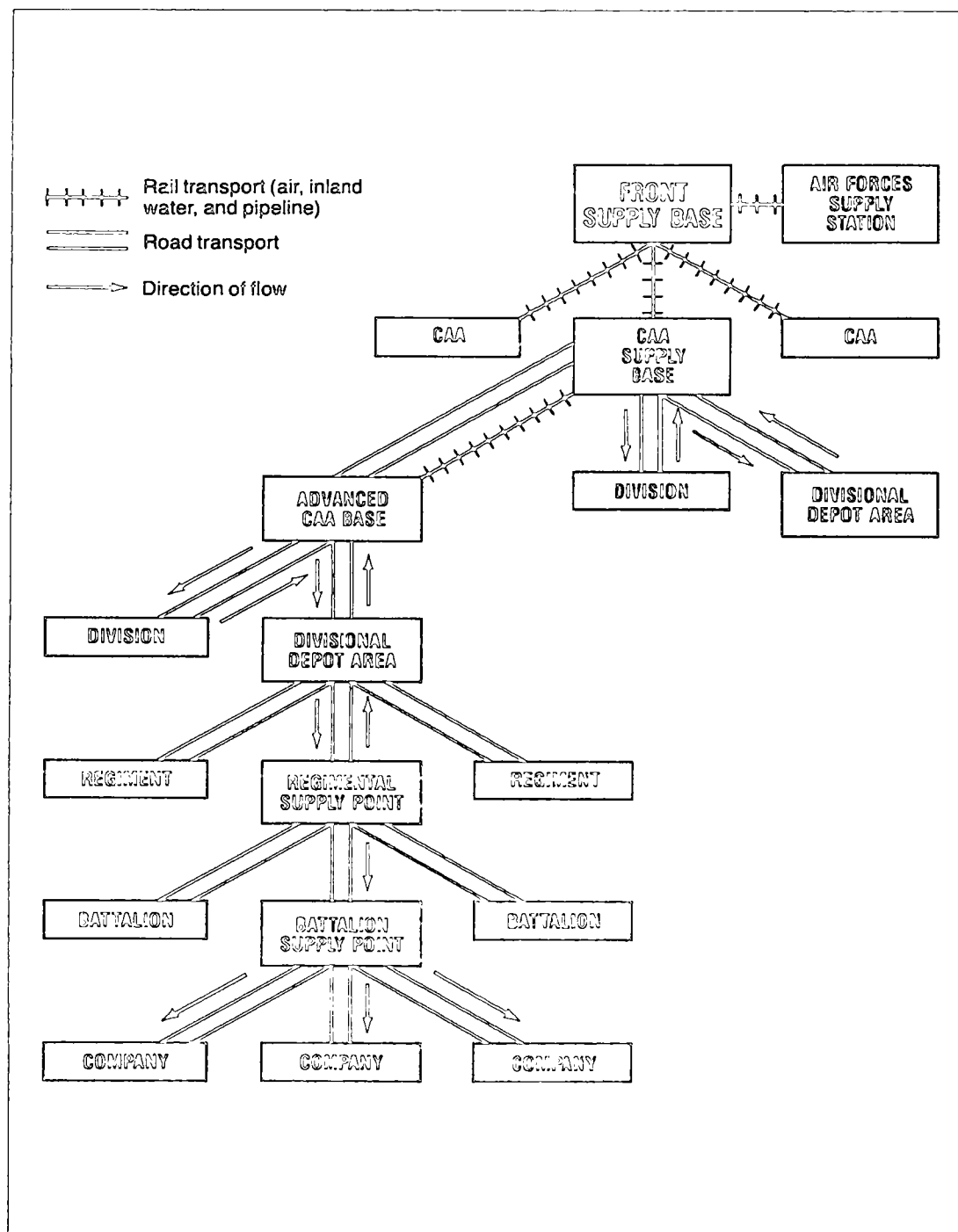
Division Depot Area. The division depot area is usually located near a road junction or along a main road. Supplies are generally kept on wheels, but dumps on the ground may be established in logistical preparation for major operations. The depot area is commanded by a chief who is subordinate to the division chief of the rear.

Regimental Supply Point. It is usually located along a supply road from division. Its facilities and functions are similar to division, but on a much smaller scale. Supplies are maintained on trucks. At regiment there is no depot chief for administration as at higher echelons. Administration is conducted by the regimental chief of the rear.

Logistical Elements.

- In the offense, companies, battalions, and regiments do not maintain logistical installations in fluid offensive or defensive combat. All rear services are performed by their parent division. The logistical elements of a second-echelon regiment are immediately to the rear of the regimental assembly area. When the regiment is part of the second echelon to an army, these elements are with the regiment's troops. A second-echelon division rarely has a rear area, but its depot will be about 3 kilometers behind its assembly area. The rear areas of attached units usually are within the rear of the unit being supported.
- In the defense, the rear installations of second-echelon regiments are located from 16 (first-aid station) to 20 (munitions depot) kilometers from the main battle area. All rear installations of a second-echelon division are located 40-50 kilometers from the main battle area.

Flow of Supplies Within the FRONT



The general governing principle concerning motor transport is that supplies move from higher to lower units with the higher unit supplying the transport. Thus, division transport carries supplies to a regiment, regimental vehicles carry to battalion, and battalions deliver to the subunits in the field. Supplies and

equipment can be carried to the FRONT level by railroad or heavy airlift and are dispersed to the various units by truck (or possibly by airlift). Smaller units are not saddled with large numbers of trucks and personnel. Motorized rifle battalions, for instance, have supply and maintenance sections totaling only about 15 men with five or six vehicles. The result of this approach is a relatively "light tail" for combat units, allowing greater maneuverability and mobility in the field. Divisions usually carry about 5 days' stock of supplies, equipment, and rations with them on the march. Armies usually carry 1 or 2 days more. Units replenish as often as possible to maintain their ability to strike quickly from the line of march.

Logistical Support in the Offense

Logistical build-up includes placing ammunition at firing positions, the establishment of dumps at division and regimental areas, and the stocking of advanced army supply bases, army supply bases and, if necessary, forward sections of FRONT depots. The first-echelon division's motor transportation, augmented by army transportation or transportation of second-echelon divisions, hauls ammunition to firing positions and supplies to dumps in division and regimental areas from army supply bases. Simultaneously, army transportation hauls supplies from FRONT to advanced army supply bases, which are established in the rear area of first-echelon divisions. FRONT motor transportation hauls supplies to army supply bases from the FRONT base. The uninterrupted flow of supplies to the troops is assured by the forward displacement of advanced army supply bases, the army supply base, the FRONT supply base, and by means of army mobile supply columns following behind the first-echelon divisions.

Prior to the offensive, basic levels are adjusted and greater amounts of ammunition and fuel are carried when the battle develops into a fast-moving mobile operation. Units assigned to flank protection and advance elements are provided sufficient supplies to support them for the duration of the mission. The organic transport of the division, augmented in some cases by army, is capable of transporting all of the combat and combat support elements of the division together with an estimated 5-day supply of ammunition, POL, and rations.

Petroleum, Oils, and Lubricants Supply

Divisions receive their POL supplies by vehicle from army depots. These depots normally stock enough POL to refuel all elements of an army twice. In preparation for stepped up combat operations, twice the normal requirement may be stockpiled. FRONT pipeline brigades and theater rolling units are responsible for supplying POL to army and FRONT POL depots. At army and FRONT POL depots and POL points, fuel is stored in tanks. Oil and lubricants are stored in 150- to 500-liter drums. Divisions use tank trucks, 180-liter drums, and 20-liter cans for supply. In addition to maintaining full tanks on all vehicles, the divisions retain sufficient reserves to refuel their units one or two times. Regimental reserves are sufficient to refuel regimental elements up to 70 to 75 percent capacity.

General Purpose Transportation and Combat Vehicles

Trucks, tractors, sedans, special-purpose wheeled vehicles, and motorcycles are supplied at FRONT and army levels by the motor vehicle-tractor directorate at each level. Tanks and armored vehicles are supplied by the commander of tank troops at FRONT and army level. At division and regimental levels, the supply of all vehicles, combat and noncombat, is consolidated under the deputy for technical affairs. Agencies responsible for vehicle supply are also responsible for maintenance and spare parts.

Specialized Equipment

Engineer, signal, and chemical equipment is supplied by separate supply channels within each branch of service from FRONT to regimental levels. Medical and veterinary services have their own supply channels, and these services are subordinate to the main directorate of the rear.

Section 3—Field Maintenance

It is opposing forces practice to repair tanks and vehicles as close to the main battle area as possible. This is accomplished by mobile repair units which are sent out by regiment, division, and army. If a vehicle is not on-the-spot repairable or the tactical situation does not permit repairs, vehicles are then evacuated. There are no repair units at company level. Although some drivers are qualified mechanics, all drivers are required to carry out organizational maintenance. At battalion level, there are small repair units in all line divisions that contain at least a shop truck and four or more mechanics. These units are part of the service platoon and are capable of performing light repairs on trucks and armored vehicles. Motorized rifle regiments have a combined motor vehicle-tank workshop and tank regiments have separate tank and motor vehicle-tractor workshops. Each division has separate motor vehicle and tank repair shops. These workshops consist of several shop trucks, spare parts supply trucks, tank retrievers, and more than 100 men. These workshops can perform major repairs on trucks and medium repairs on armored vehicles. Armies generally have two or more tank and motor vehicle repair battalions. A FRONT has several independent repair battalions which are semimobile.

The chief of artillery at regiment and above is responsible for the maintenance of small arms, automatic weapons, mortars and artillery. Regiments have two or three armorers located at the regimental ammunition depot to perform light repair on small arms and some automatic weapons. Armorers in artillery regiments are qualified to perform low-level repairs on artillery as well as small arms. Weapons maintenance repair capability increases up to FRONT which has the capability to do complete overhauls and major repairs to artillery and combat vehicles. Signal, chemical, and engineer equipment repair units are not at the regiment and division levels. Such equipment is repaired, if possible, in respective units, or done at army and FRONT levels. Evacuation is accomplished by returning supply transportation units. Routes of evacuation are different from those used moving forward for resupply.

Section 4—Medical Support

General

Opposing forces battlefield medical services are concerned chiefly with evacuating casualties from combat areas to the rear for treatment. Evacuation always proceeds from lower to higher units, with the higher units supplying the transportation. A combat battalion normally has only one UAZ-452 ambulance, while higher units have more evacuation vehicles. Ambulances are normally used as far forward as possible, and the use of light aircraft and helicopters for evacuation may be receiving increased emphasis.

Organization

Medical units are organic down to battalion level in tank, motorized rifle, and airborne divisions. Company-level medical service provides only for first aid and evacuation to be administered by medics or by fellow soldiers.

Opposing forces tank, motorized rifle, and airborne battalions all have a small medical section of about five men, including a first-aid trained warrant officer and a medical orderly in each company. These sections have facilities only for first-aid treatment and evacuation to higher units via a UAZ-452 ambulance organic to each battalion.

At regimental level there is a medical company of approximately 30 men including 2 qualified surgeons, a dentist, several warrant officers, along with medics, nurses, and drivers. The regimental medical point is capable of performing emergency surgery and giving blood transfusions.

Divisions have medical battalions of some 150 men, of whom 12 are officers. The divisional medical battalion is commanded by a chief surgeon and is equipped to perform major surgery. A medical battalion can handle a flow of several hundred casualties a day. It has dental, transport, medical supply, and other facilities.

At FRONT and army levels, medical battalions and hospitals are attached as needed to accept evacuated casualties from divisional medical points. More difficult cases are transferred to FRONT and army or base hospitals from division level.

Evacuation Procedures

Evacuation proceeds from lower to higher units. Ambulances from higher units will come as close to the main battle area as possible. Empty supply vehicles moving toward the rear also are used to carry casualties. Evacuation by helicopter and light aircraft from advanced areas is possible, although this technique has not been highly developed.

Medical corpsmen or infantrymen bring casualties to the company collection points from which they are evacuated to the battalion medical point usually by stretcher. At the battalion medical point field dressings and first aid may be

given, but evacuation to regiment by ambulances from the regimental medical point should follow quickly. Most casualties must go to divisional medical facilities for major treatment.

Equipment

Individual first aid kits are issued to soldiers. These are covered with rubberized cloth and are sewn into the soldier's tunic. Medical corpsmen carry kits containing bandages, tourniquets, splints, and other material, but no medicine. More complete medical supplies are carried by medical units, and special kits may be used for amphibious or airborne operations.

Sanitation equipment and disinfecting and decontaminating facilities are found within the organic medical battalion.

Personnel

Physicians are the highest ranking medical personnel, but there are comparatively few in the opposing ground forces. Many of the functions of physicians are performed by specialized paramedical officers who have usually graduated from junior colleges and have advanced training in medicine but have not received medical degrees. In case of emergency, nurses may be called up from civilian positions. Medical corpsmen are trained in first aid and evacuation.

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Chapter 16

SPECIAL OPERATIONS

TABLE OF CONTENTS

Section 1

Airborne Operations	16-1
General	16-1
Organization	16-1
Operations	16-2
Equipment	16-2
Reconnaissance for Conduct of Operations	16-3
Conduct of the Operation	16-3
Sabotage, Disruption, and Airfield Attack	16-5
Logistics	16-5
Air Support During Operations	16-6

Section 2

Assault River Crossing Operations	16-6
General	16-6
Principles	16-6
Types of Assault Crossings	16-6
Nonengineer Crossing Capability	16-7
Hasty River Crossings	16-7
A Typical Hasty River Crossing Operation	16-8
Timetable for a Hasty River Crossing	16-9
Deliberate River Crossing Operations	16-11
Antitank Defense Priority	16-12
Use of Helicopters ..	16-12
Defense of a River ..	16-12

Section 3

Operations in Fortified Areas	16-13
General	16-13
Organization for Assault	16-13
Assault Division	16-13
Assault Regiment	16-14

Section 1 — Airborne Operations

General

Since World War II, the opposing forces have continued to emphasize airborne assault operations to a much greater extent than Western armies, and today there are an estimated seven opposing forces airborne divisions in active service, each with approximately 8,000 men.

The use of airborne troops is an important feature of opposing forces doctrine for high-speed offensive operations. Airborne operations include:

- Parachute operations carried out by airborne troops and possibly followed by the air landing of further troops after suitable landing zones have been secured.
- Helicopter-borne assaults largely carried out by motorized rifle battalions. For a discussion of helicopter assault operations, refer to chapter 14.

Organization

The basic components of the airborne division are three paratroop regiments; an artillery regiment consisting of a howitzer battalion, an antitank battalion, an MRL battalion, and an anti-aircraft battalion; an engineer battalion; a signal battalion; a medical battalion; a transportation battalion; a maintenance battalion; and various support and service companies. The total personnel strength of an airborne division is about two-thirds that of a motorized rifle division.

Assault Battalion	16-14
Tactical Preparations	16-15
Fighting in Built-up Areas	16-15
General	16-15
Attack to Capture a City	16-16
Section 6	
Partisan and Antipartisan Operations	16-17
General	16-17
Partisan Combat Methods	16-18
Partisan Organization and Employment	16-18
Conduct of Operations	16-19
Antipartisan Operations	16-19
Passive Antipartisan Measures	16-19
Active Antipartisan Measures	16-20
Section 7	
Night Operations	16-22
General	16-22
Timing of Night Attacks	16-22
Preparation and Planning	16-22
Conduct of Attack	16-23
Section 8	
Mountain Operations	16-24
General	16-24
Principles of Mountain Warfare	16-24
Characteristics of Mountain Operations	16-24
Fire Support	16-24
Employment of Tanks	16-24
Control and Communications	16-24
The Offense	16-24
The Defense	16-27
Section 9	
Extreme Cold Operations ...	16-27
General	16-27
Tactical Concepts	16-28
The Offense	16-28
The Defense	16-29
Organization and Equipment	16-29

Aircraft for parachute operations are supplied by the military air transport forces. It is estimated that there are virtually no distance limits placed on the capability of opposing forces military transport aviation to lift a fully equipped airborne division.

Operations

Strategic missions assigned to airborne divisions may consist of operations in divisional strength at a considerable depth with the intention of establishing a new battle front in the theater of operations. Airborne forces committed to an operation of this type could not be intended to link up immediately with ground forces and would therefore have little short-term influence on the divisional battle. In a theater war, strategic missions could consist of taking such important objectives as major port or governmental centers. However, the principal significance of the strategic mission is the implication this capability has to employ airborne units as an intervention force outside of the theater war context.

Operational missions are conducted in support of armies or FRONTS, involving the commitment of airborne units up to regimental group size at depths of about 200 to 400 kilometers from the line of contact. Operational missions would typically consist of such major actions as preventing the bringing up of enemy reserves or completing the encirclement of a sizeable US force. A support operation of a FRONT offensive might be planned to aid exploitation by ground forces after a breakthrough. Following this, a linkup with ground forces would be planned to take place within 3 days.

Tactical missions of battalion or regimental group size are conducted in support of divisional or army missions at depths up to about 200 kilometers. Typical assignments would be to secure bridgeheads, seize road and rail junctions, destroy airfields, and disrupt enemy rear areas. In an exploitation phase, linkup with ground forces would be planned to take place within 48 hours. In a nuclear environment airborne forces may be employed as an exploitation force following a nuclear strike.

Special purpose missions, conducted by special forces in sections to company strength, include sabotage, intelligence collection, disruption of headquarters, logistical installations and nuclear delivery system, and formation of or assistance to partisan groups.

Equipment

An airborne division has its own light artillery and vehicles that can be dropped with the paratroops. Additional artillery

would probably be brought in by helicopters or aircraft after the paratroops have secured a landing site. Light armor may be dropped with the self-propelled assault guns, antitank missile launchers, and light vehicles. An airborne division contains no tanks or nuclear artillery. The 57mm SP gun ASU-57 can be heavy dropped, as can the track vehicles which provide the basic means of transport for ground operations after a parachute landing. The ASU-85 can only be airlanded. *The introduction of the air-droppable amphibious infantry combat vehicle BMD to airborne units adds a completely new dimension to opposing forces airborne tactics.* The BMD, which mounts a 73mm gun, SAGGER missiles, and three machine-guns, can probably carry an airborne section under its armor for short periods, a useful capability in a CBR environment. If BMD's are dropped, wide-ranging operations by company or battalion groups with a strong antitank capability should be expected.

Reconnaissance for Conduct of Operations

The overall FRONT reconnaissance plan includes provisions for airborne assaults in the US rear. Once it has been decided to launch an airborne operation in a certain area, reconnaissance of the area is intensified.

Specific reconnaissance in preparation for an airborne operation is directed toward the following objectives:

- Selection of a suitable primary and alternate drop zone (DZ).
- Determination of the nature, composition, strength, and capabilities of the US forces on the DZ area that would interfere with the landing operations and subsequent attack objectives. Special attention is given to the presence of tank and missile units.
- Determination of the nature of the terrain, condition of the road networks, and identification of natural and manmade obstacles that would hinder the airdropping of personnel and equipment.
- Determination of the political orientation of population in the area and its probable effects on planned operations.

Reconnaissance is carried out by air, clandestine agents, long-range patrols, and airdropped reconnaissance teams. Reconnaissance activities, to include dropping of parachute teams, are often conducted outside the area of proposed operations as deceptive measures.

Conduct of the Operation

General. A division uses about four to six DZ's and a regiment is allocated one or two. A typical DZ is about 3 x 4 kilometers in size.

Landing. Opposing forces airborne troops can be dropped in any season of the year and at any time of the day or night. However, drops will normally be made at night. Troops are generally dropped from minimum safety heights, and supplies follow immediately behind them. The first wave of paratroops is responsible for immediately clearing any US units from the DZ area and protecting the aircraft in any subsequent drops. The first parachutists are dropped with supporting anti-tank artillery and engineers, with the heavy equipment being dropped before the

main body of men. Forward command posts and air defense weapons are usually in the first drop. The drops are protected by fighter cover. All available fire support is used to neutralize the US air defense weapons along the flight path.

The FRONT commander mounting the airborne operation in coordination with the commander of the supporting air transport unit is the approving authority for the selection of drop and landing zones, the timing of the operations, the measures planned to secure the airhead, and the plans to support combat operations. The commander of the air transport unit is responsible for insuring that the troops and equipment arrive at the designated places at the right time.

Ground Tactics. The training of opposing forces airborne troops emphasizes the nuclear battlefield concept. Drops may be made within 30 minutes of a nuclear explosion. Parachutists are trained for movement through contaminated areas, with the function of exploiting the initial nuclear or chemical blow while the tanks and motorized rifle divisions advance. Airborne forces increase the depth of the thrust, add to the momentum of the offense, and aid the advancing tank and rifle divisions.

Airborne troops may be used in large-scale operations as part of a general advance and small-scale drops for reconnaissance or capturing/destroying limited objectives. *There is an increasing tendency for the opposing force to use helicopter-borne forces for operations in immediate support of ground forces, freeing airborne forces for operations in greater depth.* Objectives for an airborne battalion or regimental units could include other crossings and defiles whose capture would expedite the development of the offensive and prevent enemy reinforcement of threatened areas.

Reconnaissance plays a vital role in the opposing forces scheme of battle, providing needed information for nuclear strikes and conventional offensive maneuvers. Small airborne reconnaissance units may be dropped in rear areas, possibly working with local guerrilla or partisan groups in gathering intelligence. Strategic and tactical doctrine stresses the need for full intelligence planning at every level. Battlefield intelligence is especially important in directing tactical nuclear strikes. Each airborne division includes a special reconnaissance company.

The standard procedure in airborne operations seems to involve the dropping of battalion-sized groups just over 160 kilometers beyond the line of contact or regimental-sized units up to 320 kilometers beyond the line of contact. These airborne forces are used to facilitate the movement of the ground strike forces by seizing bridges and fords, capturing airfields for followup landings of airlifted troops and heavy equipment, and carrying out sabotage missions against nuclear launching and communication facilities. Operating in the rear areas, they may also divert the movement of reserve forces from the main battle zone and generally disrupt US offensive and defensive capabilities.

Movement is mainly on foot though some vehicles are dropped with the assaulting troops. Transport is augmented by captured vehicles. Movement normally takes place at night. Attacks are launched from the line of march and from the flanks and rear whenever possible.

Defense. Company and platoon strongpoints are established covering the likely approaches. Whenever possible, these are mutually supporting, with particular emphasis on antitank weapons. Gaps that normally exist between battalions are covered by patrols, ambushes, and minefields. Strong reserves are always maintained, including antitank reserves of assault guns, ATGM, and engineer obstacle detachments for the rapid laying of minefields. To mislead and harass the enemy, company groups are sent out or dropped on the most likely axis of approach up to 20 kilometers from the main position. Defensive operations are aggressive and include the bold use of ambushes, raids, and counterattacks.

Fire Support. Guns and assault guns are normally decentralized to battalions and used for direct fire. Fire support is provided by front artillery when within range, and large numbers of offensive air sorties are usually allocated.

Sabotage, Disruption, and Airfield Attack

Sabotage missions are usually carried out by a force up to company strength, reinforced with specialists for dismantling or disabling equipment. The main targets are nuclear delivery means, their resupply and support facilities, and missile guidance equipment. Static targets are attacked after clandestine approach and, after capture, are put out of action. Equipment of intelligence value may be evacuated intact. Nuclear weapons on the move are ambushed. After a raid or ambush, sabotage groups move out to an assembly area for withdrawal or further operations.

Disruption. Parachute assaults may be carried out with the specific tasks of destroying headquarters and logistical installations and of disrupting movement and the operation of the logistical system. In addition, all airborne assaults in the rear areas have the secondary task of harassing supply and movement. Attacks against headquarters are normally made in company group strength, but a battalion group may be used against a major headquarters. Headquarters are seized by surprise raids mounted simultaneously from different directions and usually at night. The aim is to split the headquarters with a number of rapid thrusts and destroy its elements piecemeal. Disruption of movement and of the logistical system is carried out by destruction of depots, installations, bridges, railways, roads, and pipelines and by ambushes and raids on routes. Raids and ambushes are carried out by platoons or companies. Raids generally take place at night.

Airfield Attack. An attack against an airfield is carried out by a force of battalion to regimental size. This force is normally reinforced with engineers to repair the airfield facilities, if the opposing forces wish to use them later, or to demolish the facilities to deny their use to the opponent. If possible, the drop is made directly on to the airfield. If the objective is to be secured for use, a defensive perimeter is established at a sufficient distance to prevent aimed machinegun fire from hitting the runways.

Logistics

Resupply is by air usually before or at dawn. Supply reservoirs are established in uninhabited places and under cover. Technicians equipped to carry out minor

repairs accompany the force. Troops are also trained to use captured weapons, vehicles, and equipment. Medical aid stations are set up in concealed positions. Wounded are evacuated by air, if possible, and usually at night. Normally, airborne units rely on linkup with ground forces so that the wounded may be evacuated by the organizational means of the ground forces.

Air Support During Operations

Fighter aircraft escort the transport aircraft. During the landing fighters protect the landing zone from air attack, engage air defense positions, give close air support to the troops that have landed, engage approaching US force reserves, and provide smokescreens when required. Bombers may also be allotted for close support to the landed units.

Section 2—Assault River Crossing Operations

General

Opposing forces are well aware that in any advance across Central Europe they will need to cross at least one water obstacle a day. Their equipment, organization, and training are therefore designed to insure that river crossings are regarded as a normal part of a day's advance to be carried out from the line of march whenever possible. Closing on a river line or consolidating a bridgehead are not regarded as separate phases of the battle.

Principles

The following principles are considered by opposing forces as the key to a successful assault crossing:

- Reconnaissance.
- Early planning and thorough organization.
- Destruction of the enemy in the area of the obstacle by nuclear, chemical or conventional fire.
- Speed and surprise.
- Crossing on a broad front.
- Swift development of the attack on the far bank.
- Skillful and rapid engineer techniques.
- Air defense.

Types of Assault Crossings

The Hasty Crossing. Every attempt will be made to cross a water obstacle and secure crossing means intact by closing with the withdrawing forces or by pursuing them so closely as to prevent effective demolitions. A helicopter assault may be carried out to seize crossings in advance of the leading troops. Forward detachments will often be detailed for this task. Reconnaissance and march security elements will attempt to cross immediately on reaching the obstacle.

The Deliberate Crossing. A deliberate crossing is carried out if a hasty crossing has failed or if a large, well-defended water obstacle has to be crossed.

Nonengineer Crossing Capability

Tanks. Tanks can deep-wade up to a depth of 5 meters, providing the riverbed is hard, the current is less than 6 knots, and the banks are suitable. Snorkel equipment currently requires about 15 minutes to fit, and this may be done up to 6 kilometers back from the river. Under 2 minutes is required for final adjustments on the riverbank. Tanks are particularly vulnerable during this period and during the final approach to the river which must be made in the open to avoid overhanging tree limbs. Deep-wading will not begin until the far bank and the riverbed have been reconnoitered. Tanks in column at about 100 meters per minute will lead the crossing, followed by other AFV's. Providing the banks and bed are suitable, tanks can probably deep-wade with mine rollers fitted. A proportion of the tanks in all echelons will generally cross using deep-wading techniques.

Infantry Fighting Vehicles. AFV's and BMP's used by motorized rifle units are all amphibious.

Reconnaissance Vehicles. Amphibious light tanks (PT-76) and scout vehicles (BRDM/BRDM-2) are amphibious.

Artillery. Towed guns and howitzers and their prime movers are not amphibious and rely on engineer crossing facilities.

Hasty River Crossings

Concept. Opposing forces tank or motorized rifle divisions and regiments can make hasty river crossings independently from the march. Crossings made against strong resistance usually are conducted under division control, and those crossings against weak resistance are usually made under regimental control. Units are assigned definite crossing sites whose widths are determined by the existing situation. With a division, regimental crossing sites are 3 to 5 kilometers apart. The opposing forces prefer to carry out hasty crossings at night or in first light.

Preparation. If the division advance guard units cannot seize a bridgehead, they secure the near bank so the assault crossing can be made by the division. Advance guard units send out reconnaissance elements to reconnoiter the river and to select crossing points for amphibious vehicles, ferries, and bridges. Tanks with the advanced guard are positioned to protect the division flanks. Antitank guns, heavy machineguns, and air defense elements are moved to the riverbank where they can deliver direct fire on the opposite bank.

Operation. First-echelon regiments move into assembly areas 2 to 5 kilometers from the far banks of the river during darkness, and the second-echelon regiment goes into assembly areas 10 to 13 kilometers from the river. Crossing equipment joins the units in their assembly areas. The engineers prepare the riverbank for easy entry of units into the river. Each first-echelon regiment designates an assault battalion that, in turn, designates an assault company. The assault company usually is reinforced by a platoon of amphibious tanks, an antitank gun, a squad of engineers, and a CBR reconnaissance squad. The company uses its

amphibious fighting vehicles to cross the river in one wave. The remainder of the assault battalion then crosses behind the assault company. Assault companies load into amphibious personnel carriers in their assembly areas, move to the riverbank, and cross directly behind the amphibious tanks during the artillery preparation. The artillery preparation, if any, usually lasts about 10 to 15 minutes, and is fired while the amphibious vehicles are moving up to the riverbank or as the vehicles enter the water and cross the river. On reaching the far bank, the company disembarks and attacks enemy positions that can bring direct fire to bear on the river. Ferry vehicles return to the near bank to ferry across heavier equipment. Landing points are prepared for other units that are following. The remainder of the assault battalion then crosses and can attack to enlarge the bridgehead. When the first elements of the assault company reach the far bank, engineer units assemble more ferries and ponton bridges on the near bank. Heavy equipment can usually start to cross in about 2 to 3 hours. With heavy equipment across, the first-echelon regiments attack to deepen the bridgehead and to secure the crossing for the rest of the division.

Consolidation. Construction of a heavy ferry or ponton bridge for the division's heavier equipment is begun when direct fire into the site is eliminated. Divisions usually are across the river in less than 8 hours after the crossing operation starts. The division objective will be the same as in a normal operation; the river is considered an obstacle—not an objective. The divisions immediately deepen the bridgehead to at least 10 to 15 kilometers. The army second echelon crosses the river when the first-echelon divisions break out of the bridgehead. The army uses its second-echelon forces to widen the bridgehead and to encircle and destroy enemy forces along the river to permit commitment of the tank division.

A Typical Hasty River Crossing Operation

Preparation. The divisional commander makes an outline plan for the crossing well in advance, probably in the assembly area, and issues verbal orders. Ground reconnaissance units, reinforced with engineer reconnaissance parties for selecting deep-wading sites, are dispatched some 40 kilometers ahead of the main body. Visual air reconnaissance sorties are flown throughout the approach. A helicopter force may be mounted with the task of securing a crossing unless the commander has decided to use them during the assault. A forward detachment or detachments are normally deployed.

The Approach. The division approaches the obstacle on a broad front in tactical march formation. Reconnaissance elements reach the river, fan out, and attempt to cross or at least to reconnoiter the far bank. Visual air reconnaissance is intensified. All reconnaissance reports reach the divisional commander who completes his planning and issues orders to the leading regiments and the engineers by either liaison officer or radio. The forward detachment reaches the river and, supported by artillery fire from the main body, attempts to seize a crossing. Advance guards then reach the obstacle and reinforce the forward detachment or deploy to cover the main body. Finally, first-echelon units of the main body move into areas 2 to 5 kilometers from the river.

The Assault. Artillery and tanks detailed for indirect fire engage the US forces in the vicinity of the far bank from about H-15 minutes until the crossing is under way. Opposing forces fighter support would then commence and a helicopter-borne force may deploy to the far bank under cover of fires to inhibit US defensive maneuver. The first wave with two companies in BMP's from each leading motorized rifle battalion moves from the assembly areas, crosses a line of departure set some 500 to 1,000 meters back from the river to insure simultaneous attack, and begins the crossing under cover of the planned fires and of direct fire from tanks, antitank weapons, and infantry from the rear bank. The fire plan lifts to targets in depth and some artillery reverts to being on call. First-echelon companies reach the far bank and press forward to attack US forces in the flanks and rear and to link up across the divisional front. By about H+10 minutes, supporting tanks start to cross on regimental heavy amphibious ferries or by deep-wading or fording, while second-echelon companies cross in BMP's. Ponton ferries and amphibians from division are in operation by H+45 minutes and begin to cross with the support weapons of the first-echelon battalions. By this time antiaircraft weapons will be deployed to protect the crossings in addition to the extensive fighter cover provided. In the subsequent crossing the amphibians will carry second-echelon battalions of leading regiments and regimental support weapons. The ferries will continue to shuttle artillery and air defense weapons. By H + 1½ hours the division should have a ponton bridge across the obstacle. The DAG and second-echelon regiments will cross by bridge, ferries, or deep-wading or a combination of these. Crossing areas will have been designated in advance, but may be altered to allow these regiments to reinforce a success in any particular sector.

Operations on the Far Bank. As infantry units reach the far bank, they normally dismount prior to assaulting their objectives and, after remounting, push forward piecemeal with the object of striking deep into the US defenses and linking up across the divisional front. Tanks will join them in about 20 minutes. Antitank weapons, particularly ATGM's, cross early and will be deployed to protect the flanks of the bridgehead. Air defense weapons are deployed to give all-around protection to the crossing sites. The emphasis is on expanding the bridgehead at high speed, protecting the crossing against counterattacks (chiefly by armor), and on avoiding dangerous congestion in the bridgehead area.

Tank Formations. Tank formations will often be used in the first echelon in an assault crossing, unless the obstacle is very wide or heavily defended. The tactics and conduct of the operation will be very similar to those of the motorized rifle division. The motorized rifle regiment of the tank division will usually be attached by battalions to tank regiments and will cross in the first wave in their amphibious BMP's. The tank regiments will cross immediately behind the infantry using both ferries and deep-wading sites.

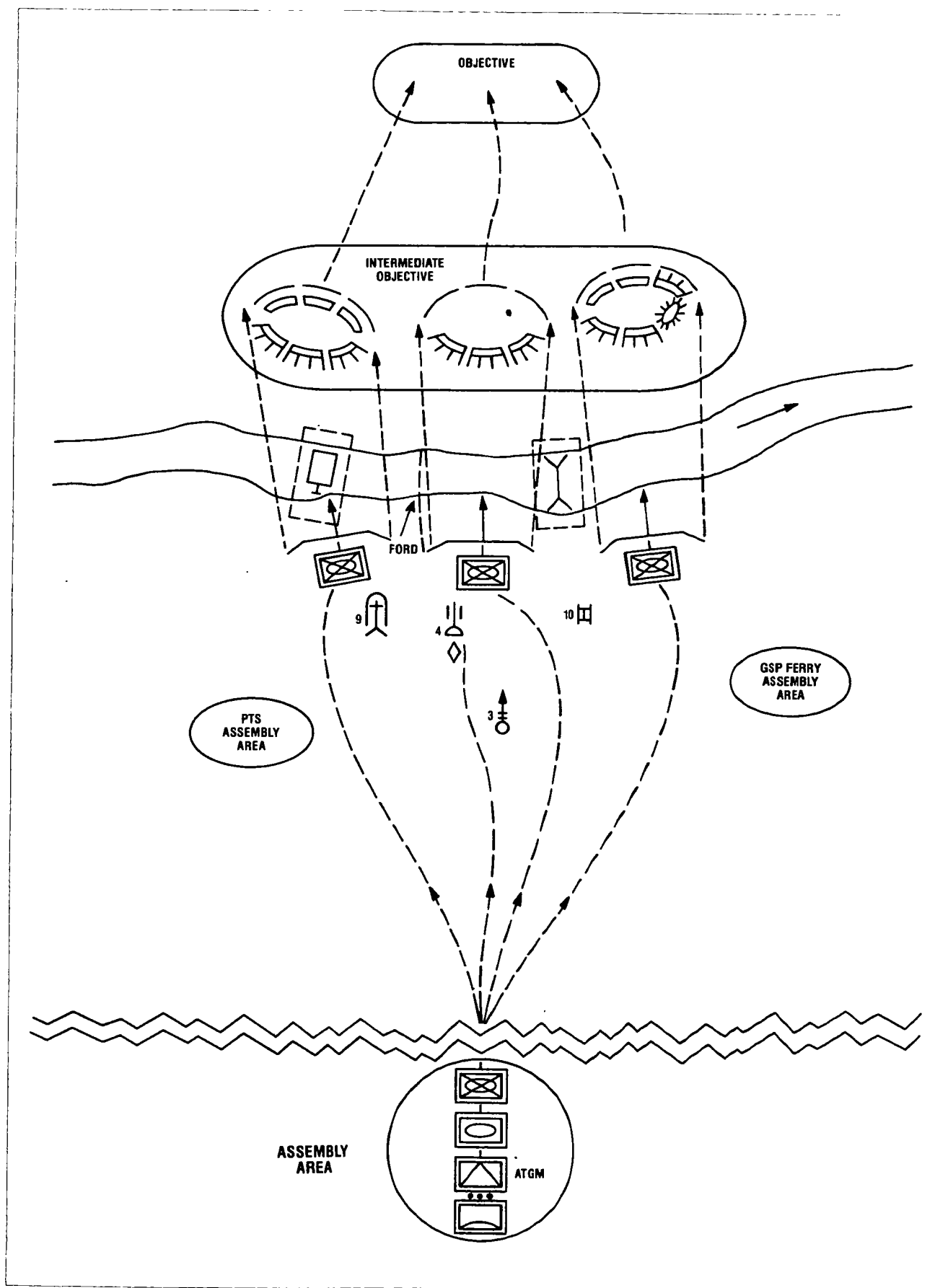
Timetable for a Hasty River Crossing

Time

Event

From H-7 hours

- Visual air reconnaissance sorties are flown over the area of the obstacle.



From H-2½ hours

H-1½ hours

H-1 hour

H-45 minutes

H-30 minutes

H-15 minutes

H-hour

H+5 minutes

H+10 minutes

H+30 minutes

H+45 minutes

H+50 minutes

H+1½ hours

From H+1½ hours

- In a hasty crossing, the helicopter force could seize the crossing area any time between H-2½ hours and H-hour.
- Reconnaissance elements reach the obstacle, attempt to cross, reconnoiter the crossing, and report back.
- Forward detachments reach the obstacle and reinforce a helicopter assault (if made) or attempt to seize crossings from the line of march.
- Advance guards reach the obstacle and support the forward detachment or deploy to cover the move-up of the main body. Also at this time, final orders are issued by the divisional commander. Artillery is deployed to support the assault.
- First-echelon batteries move into the forming-up areas. Engineer equipment marries up with leading regiments. Tanks detailed for deep-wading prepare to snorkel. One or two nuclear strikes may be fired during a nuclear phase of operations.
- Conventional fire begins and continues until H-hour. First-echelon companies move forward in BMP's. Air defense weapons deploy to the crossing area.
- First-wave of BMP's enters the water. Fire lifts. Possible helicopter assaults seize areas on the far bank to prevent US defensive maneuver. Fighter ground attacks commence.
- First-wave companies reach the far bank and deploy.
- Regimental heavy amphibious ferrying begins with first-echelon tanks. Tank snorkeling begins. Regimental commander and second-echelon companies cross in AFV's. Second-echelon battalions begin to cross. Amphibians begin ferrying regimental artillery and ATGM's.
- Construction of divisional ponton bridges commences.
- Regimental ponton ferry points provided by division are opened and operated in the following order of priority:
 - Any remaining first-echelon tanks.
 - Regimental artillery group and some air defense weapons.
- Divisional commander and forward command post cross in AFV's.
- Ponton bridge opens.
- Divisional artillery group and the FROG battalion cross. Second-echelon regiments cross.

Deliberate River Crossing Operations

Concept. The opposing forces undertake deliberate river crossing operations only when hasty river crossings fail or are not possible. The deliberate crossing is carried out in a manner similar to the hasty crossing; however, more detailed planning, reconnaissance, and preparation are involved. Centralized control of

the crossing is exercised at army level and nuclear fire support is used. Crossings, closely controlled, are made on a broad front.

Preparation. Thorough reconnaissance and assembly and equipping of forces are accomplished during the preparatory phase. Every intelligence means available is used to get complete information about the US force. Units are reinforced in the same manner as for a hasty crossing. A combined arms army usually crosses with up to three divisions in the first echelon. Divisions cross with two regiments in their first echelons, and the regiments cross with two battalions in the first echelon. The leading battalions cross in waves of reinforced companies.

Operation. First-echelon battalions are moved into assembly areas under concealment of darkness or smoke about 1 to 1½ kilometers from the river. Artillery is positioned to place fire throughout US forward defenses. The actual assault crossing usually is made just before dawn, preceded by nuclear strikes and an intensive air and artillery preparation of about 30 minutes. The actual crossing is conducted in the same manner as for a hasty river crossing.

Antitank Defense Priority

To prevent US armor from overrunning bridgeheads, the opposing forces set up antitank defenses as soon as the equipment has crossed the river. The division antitank artillery and engineer mobile obstacle detachments cross immediately after the first-echelon regiments. Army antitank units may cross before second-echelon divisions.

Use of Helicopters

Helicopters are used for reconnaissance, to insert reconnaissance detachments across rivers, and to move engineers and equipment to ferry and bridge sites. Helicopters are also used by assault elements to cross rivers and thus avoid actual water-crossing operations until a beachhead has been established and secured.

Defense of a River

Doctrine. *Opposing forces consider a water obstacle as a natural obstruction enabling the organization of a firm defense with relatively small forces and on a wider front.* The defense is usually organized on the side of the river that is completely controlled by friendly units. When opposing forces expect to recross a given river, an attempt will be made to retain bridgehead on the far side.

Deployment. Opposing forces place the forward defense echelon as far forward as possible. Second echelons and reserves are held in areas from which they can be moved quickly to any sector where the US force may succeed in crossing so as to hit the US force with a counterattack before it can organize a bridgehead.

Combat Support. All necessary measures to counter a possible airborne or air assault attack are taken. Air defense units are deployed in depth throughout the defense area. Engineer units set up obstacles in the water and artillery units prepare fire plans to hit a crossing US force with flanking and intersecting fire while it is halted or slowed down by the obstacles. Antitank weapons are employed to cover those areas suitable for tank crossings. Extensive use is made of tank traps.

Defense Operations. The US force approaching a water obstacle is taken under fire at maximum range. Nuclear and chemical weapons are employed against concentrations of personnel and crossing equipment and fire support means. Antitank guided missiles, tanks, and other artillery are brought up close to the river bank to lay direct fire into the US force engaged in crossing the river. Facilities such as dams and flood gates are used to aid in the defense effort. Once the US elements have crossed the river, their hold on the near bank is subjected to counterattacks by second-echelon and reserve forces while first-echelon forces attempt to prevent additional US units from crossing and reinforcing the elements already on the friendly side of the river.

Section 3—Operations in Fortified Areas

General

Combat formations of motorized rifle, tank, artillery, engineer, and aviation units are used to break through fortified zones. Opposing forces doctrine stresses the intensive training of assault groups together with the supporting arms as the most important single factor in the successful assault of heavily fortified zones. *Where possible, at least two rehearsals by assault groups and supporting arms are held in rear areas prior to the actual assault.*

The assault usually is made with the main effort along a single front from 10 to 25 kilometers wide or in multiple thrusts each approximately 3 to 5 kilometers wide. Secondary attacks are made simultaneously for diversion and to seize isolated fortified positions. Emphasis is placed on attacks against the flanks of the penetration area. Assaults are generally made on a narrow front against fortified areas in mountains and swamps.

The destruction of US forces in a fortified zone is accomplished by the complete breakthrough of the US defensive positions in the sector to clear the entire fortified zone. Tank and motorized rifle divisions exploit the breakthrough.

Organization for Assault

Motorized rifle assault groups are composed of a balanced force of all arms. The composition of the assault groups provides for the immediate replacement of losses in the leading elements. Although some details of the assault organization vary with the situation, the basic structure of the assault group is standard. Organization of assault groups begins with the assault division. The basic element is the assault battalion.

Assault Division

The assault division normally consists of a motorized rifle division reinforced with an engineer regiment. Normally, one regiment of tanks, some self-propelled artillery, and about a company of mine-clearing, flamethrowing, and bridging tanks, support the assault. Division artillery is reinforced by battalions of heavy artillery and mortars. The assault engineer regiment includes flamethrower operators and other special engineer troops, such as demolition personnel.

The assault division is deployed in two or three echelons, depending on the strength of the US fortifications and the width of the assigned zone. Small general troop and antitank reserves are provided. The assault division zone in the main effort is about 3,000 meters wide; in secondary efforts, the zone is about 6,000 meters wide.

Four artillery groups operate under divisional control. The division artillery support groups (heavy mortars and medium howitzers) are responsible for neutralizing the forward US defenses and for reinforcing the regimental artillery groups after the assault is launched. The division artillery countermortar group (heavy mortars and medium howitzers) and the division artillery destruction groups (heavy howitzers and guns) have the missions indicated by their names. The destruction group concentrates on the destruction of permanent fortifications. The fourth division artillery group is the artillery reserve and is also used for general support of the division.

Assault Regiment

Each regiment of the motorized rifle division used in the assault usually is reinforced with:

- One battalion of the organic division artillery.
- Two companies of medium tanks, one battery of medium SP guns, and a platoon of mine-clearing tanks.
- A battalion of combat engineers.

The RAG consists of one organic battalion of division artillery and a battalion of heavy mortars. This group is under division control during the artillery preparation, but passes to control of the regimental commander during the assault phase.

The motorized rifle regiment formation in the assault is usually in two echelons. If the US fortifications are in considerable depth, the regiment may attack in three echelons. The first echelon clears passages through obstacles and minefields and assaults specified fortifications. The succeeding echelons provide security for the regiment's flanks, widen the gaps created by the first echelon, and pass through the preceding echelon to extend the depth of the penetration. The assault regiment in the main effort may be assigned a frontage of 1,500 meters.

Assault Battalion

The assault battalion is the basic unit in the assault of fortified positions. It consists of a motorized rifle battalion reinforced by two batteries of light guns or medium howitzers, a battery of 122mm SP howitzers, and a company of engineers. The assault battalion forms two assault companies. The third company is used to reinforce assault companies and the direct-fire artillery group, and to act as the battalion reserve. Each assault company deploys two platoons abreast. Infiltration and trench-clearing teams, as well as personnel for flank security, are organized from the third platoon. Each assault company is reinforced by an obstacle-clearing group of one engineer and one rifle squad, and a direct fire

artillery group of light guns or a medium howitzer battery, 122mm SP howitzer platoon, and a rifle squad for security. Direct fire artillery does not participate in the artillery preparation.

Tactical Preparations

Tactical preparations consist of preparatory fires, breaching of obstacles, and final preparation by assault units. The nuclear preparation is greater than that used in a normal attack. Nuclear fires are used to destroy obstacles and minefields, and to reduce the need for extensive use of engineer personnel to clear the way into the main fortified area. The air and artillery preparations are of sufficient length to neutralize US defenses that may survive the nuclear preparation, but not so long as to permit remnants of the US defense to recover from the nuclear attack. Artillery and air units attack all known US fortifications on a front wider than the sector of the main effort to neutralize US positions that can direct flanking fire on the penetration area. Obstacle-clearing groups prepare lanes through minefields and wire entanglements during the night preceding the assault, and move forward during the artillery-air preparation to continue obstacle clearance.

Section 4—Fighting in Built-up Areas

General

Attack. *Opposing forces offensive doctrine, with its emphasis on speed, determines that built-up areas should be avoided.* However, when this is not possible, the opposing forces will then aim to seize towns and built-up areas by surprise attacks from the line of march, hoping to secure the objective before the US force can establish elaborate defenses. If this cannot be achieved, troops will blockade the town for a subsequent attack by a second-echelon formation, while the main body of the first-echelon units carry out a deliberate attack.

The Surprise Attack. The surprise attack is usually carried out by strong forward detachments supported by airstrikes. Attacks are usually made from the flanks and rear. Rapid thrusts are made to seize the most important objectives and streets, to split the area into isolated pockets of resistance, and then to destroy them piecemeal. A helicopter landed force may be employed against a town.

The Deliberate Attack. The deliberate attack is preceded by an artillery preparation, chiefly by howitzers and mortars, and by airstrikes. Direct fire weapons, sometimes including large caliber guns, are attached to assaulting units and may be used in the preliminary bombardment. Tanks are attached to the motorized rifle companies and platoons. Frontal and flanking attacks are carried out simultaneously along main routes. Any centers of resistance are outflanked and attacked from the flanks and rear. Reconnaissance, demolition, and assault parties infiltrate the defenses, using sewers and underground passages where possible. Captured objectives are consolidated and the remaining defenses destroyed piecemeal. Once the town has been secured and cleared, the assaulting force immediately moves out. In a nuclear environment, a town which cannot be captured by conventional means may be subjected to a nuclear strike.

Defense. Opposing forces defending built-up areas are mainly deployed in the outskirts to prevent bypassing and envelopment. Within the towns, company and platoon strongpoints are established to cover the main approaches. Strongpoints are usually established in corner buildings prepared for all-around defense and stocked with ammunition, supplies, and water. Fire is coordinated between adjacent strongpoints. Obstacles are set up in the gaps between strongpoints and along streets, and the approaches to them are mined and covered by fire.

The tank regiment of a motorized rifle division is usually deployed in the approaches to the built-up area and has the task of counterattacking the US forces by passing or enveloping thrusts. The tank battalion of motorized rifle regiments is broken down into companies and platoons and is deployed by platoons in ambushes and by single tanks in strongpoints.

Great emphasis is given to the use of rapid, small, local counterattacks to recapture strongpoints before US forces can consolidate.

Attack to Capture a City

General. There are two occasions when strategic considerations, often combined with political and psychological reasons, make it necessary for opposing forces to capture a city by more direct methods. Opposing forces consider an attack on a city as comparable to the assault of a fortified zone, but with certain advantages for the attacker. The civilian population imposes a burden on the defending military forces with respect to food, water, health, and shelter. On the other hand, the offense in city warfare has handicaps not found in open terrain. The rubble of destroyed buildings affords the defenders easily adaptable defensive positions with excellent camouflage. The ease of mining and booby-trapping, the presence of traps for tanks and artillery, and the danger of collapsing structures favor the defense and must be overcome by specially trained assault groups. The presence of unsuspected passages, such as subways and sewers, and the ease of interior communications facilitate infiltration, counterattacks, and breakout offensives by the defending forces. Where the layout of these passages is known, opposing forces will use them to infiltrate reconnaissance and sabotage groups into the city.

Reconnaissance. Detailed intelligence of the main fortified city zones is prepared, to include firing positions and approaches affording the best cover. The ease of concealing weapons in city warfare makes their location especially important. Combat reconnaissance detachments may operate in a city for as much as 6 days before an assault. Reconnaissance is continued during the assault. Combat reconnaissance is supplemented by studying city plans and locating utility systems, subways, and sewers. Special patrols are organized to capture prisoners for interrogation.

Assault Formations. The basic unit in city warfare is the reinforced motorized rifle battalion. The battalion is deployed for assault in a column formation composed of four distinct groups. The leading or infiltration group usually consists of a motorized rifle company and antitank gun platoon. The main body is the assault group and is similar in strength and composition to the motorized rifle

battalion assault group organized for the attack of fortified zones. It consists of a motorized rifle company, about one-half of the battalion heavy weapons, and a detachment of demolition engineers from the motorized rifle regiment. Supporting weapons include two to three battalions of direct fire guns and a platoon of SP guns. The third group is the support group that includes the remainder of the battalion heavy weapons, three to four direct fire guns, and one platoon of medium tanks or SP guns. The last group is one motorized rifle company that provides flank security patrols and acts as the battalion reserve. Subgroups of varying size and composition are detached for separate assault missions on isolated structures.

Conduct of the Attack. The first phase of the attack consists of establishing outposts and surrounding the built-up area. Some portions of the attacking force are used to prevent US counterattacks from interfering with the assault of the city. Tanks cover all exits from the city, and a tank reserve is held to engage US counterattacks.

The city is divided into battalion areas. The attacks, launched after artillery and air preparations, are supported by artillery fire and airstrikes. The battle then takes the form of a number of independent actions by small units that attack one block of buildings after another, consolidating their gains, and clearing all houses, tunnels, and sewers as they advance.

Use of Artillery. Light artillery is used to destroy US firing positions by direct fire. Batteries attached to motorized rifle units conduct direct fire at embrasures, windows, and other US firing positions. In addition to neutralizing US firing positions, direct fire is used to create breaches in buildings, walls, and barricades. Guns are displaced forward alternately under cover of heavy fire from other guns and motorized rifle units. Large caliber howitzers are used to destroy buildings.

Mortars cover avenues of US troop movements such as street intersections, trenches, and alleys. Mortar firing positions are placed behind walls or inside buildings close to their targets. Their mobility and effective fire from concealed positions provide strong fire support for the assault groups.

The artillery reserve is used for counterbattery fire. Massed fire from heavy batteries of the artillery reserve is used against forts or other strong US fortified positions. Other missions for the artillery reserve include interdiction and destruction of US supply installations, headquarters, and communication centers. The artillery reserve is retained under centralized control by army and division.

Section 5—Partisan and Antipartisan Operations

General

Opposing forces partisan bands operate in isolated areas in small strength and are frequently dropped from aircraft well behind the US front in rear support areas to support the overall effort of the opposing forces advance. Partisan group activities seldom cover areas near the front except when extensive, pathless forests favor their approach. In general, these partisan groups maneuver in rear areas, in

woods, and swamps next to highways and railroads. They avoid open territory and regions occupied by US troops, but keep constant surveillance over US activities.

Partisan Combat Methods

During large-scale US breakthroughs or withdrawals, strong partisan groups coordinate their operations with opposing forces special operation units such as ski units, infiltrated infantry, or paratroops. This will require the US to muster substantial force (usually several infantry divisions) to combat the joint opposing forces and partisan effort.

Prior to large-scale opposing forces offensives, partisan bands or groups will infiltrate into areas designated as opposing forces objectives. Such movements, therefore, will give some indication of their intentions. On the other hand, during each opposing forces withdrawal (as well as subsequent battles of encirclement), many of the opposing forces soldiers cut off from their own forces (and in some events, entire opposing forces combat units) can make their way to the partisans and continue to fight with them. In such instances, partisan activities develop into a serious threat.

Partisan Organization and Employment

Opposing forces partisan bands are generally organized into groups of 300 to 500 personnel. As long as the front remains static, these groups remain in a fixed location. During winter months, they are quartered in excellently constructed and heavily guarded camps. Smaller groups, varying greatly in strength, are comprised of at least 100 personnel. Attached to each group is a number of these smaller partisan groups. These branch out through the entire rear area and frequently are only in loose liaison with the groupment. They constantly change their position and, therefore, are difficult to locate in the vast rear area. There are contact men in all the larger towns and important villages. Dispersed and cutoff opposing forces units provide them tactical striking power.

Every camp of the larger partisan groups is secured on all sides to a depth of several hundred meters by thick underbrush, brier obstacles, or abatis and wire entanglements. All roads leading to the camp will be blocked or camouflaged or detours will be built which lead in other directions. Traffic to the camp is conducted on paths known only to the initiated. All movements of strangers are carefully controlled by sentries stationed far from camp and disguised as peasants. Strangers are also kept under close surveillance by a network of informers active in all villages in the vicinity.

These partisan camps are well supplied with weapons, ammunition, explosives, and rations. Food supplies are sometimes obtained by forced requisition in nearby villages. Supplies are normally delivered to the camps by aircraft which drop the rations in the immediate vicinity of the camp. The looting of US vehicles during partisan raids also provides ammunition and small arms for the bands.

Camouflage is used to deny aerial observation of the camps. The shelters are heated only at night so that no smoke will disclose the existence of the camp

during the day. Opposing forces are careful to construct sufficient overhead insulation to deny detection by US infrared sensors. Secrecy is also maintained by disseminating false rumors concerning partisan movements.

Communications, mainly provided by shortwave radio, provide the partisan units with directives, up-to-date information about current military developments in their respective sectors, and any political developments which may affect their operations. Air couriers are also used, and carefully camouflaged landing places for liaison airplanes are created in the immediate vicinity of the major camps.

Conduct of Operations

Without exception, partisan operations are carried out at night; daytime raids are of no value, except perhaps on an individual motor vehicle which may threaten to violate partisan security.

The demolition of a railroad bridge would be considered a major partisan operation. To effectively approach the selected bridge, partisans will cause a long column of refugees to move along the right of way toward the bridge. As the head of the column reaches the bridge, heavy surprise fire will be directed against the sentries and bridgehead from the end of the column. Machineguns will be set up on the roadbed in the direction of the bridge, and under the cover of this fire, the prepared demolition charges will be installed and activated.

Also included in partisan operations are the mining of a main highway, demolition of railroad tracks, mining railroad beds, surprise fire attacks on trains, looting railroad cars, raids on trucks and convoys, and destroying ration, ammunition, and fuel depots. Raids on command posts of higher US headquarters are less frequent in that opposing forces consider the threat of capture too great under these circumstances.

Opposing forces partisans avoid open combat as much as possible. This is the guiding rule for all partisan units. Opposing forces maintain that by their avoiding open combat and continuously conducting lively partisan activity, the entire US supply and communications system is seriously hampered, thereby greatly assisting opposing forces conventional units.

Antipartisan Operations

Opposing forces military theorists place great stress on the stability of the rear, a concept which they rank alongside such better-known tactical principles as surprise, mobility, and concentration of force. Opposing forces conduct both passive and active defense measures against partisan activities to protect their rear areas from disruption.

Passive Antipartisan Measures

Each front will create a special staff to collect all information concerning the appearance and movement of partisans by maintaining close contact with the military authorities in the rear areas as well as with a network of agents in areas threatened by partisans.

Small headquarters are combined to protect them more effectively against partisan raids.

Local defense units are drawn from among the civilian population in the threatened areas.

All traffic is halted on especially endangered roads at nightfall. Such roads are used in daytime only at certain hours and all convoys are escorted by armed guards.

Railroads, bridges, and trains are protected. Outguards within sight or earshot of each other are posted along railroad lines in threatened areas. The outguards are quartered in blockhouses protected by wire entanglements and abatis, behind which lay also the entrenchments for defense. Whenever a railroad line leads through wooded terrain, all trees within 50 meters of either side of the right-of-way are felled to provide a better field of vision. All trains going through danger zones will have two sand-filled gondola cars coupled in front to protect the locomotives from mines and will be escorted by a guard detachment of about 40 men.

Reinforced outguards equipped with infantry heavy weapons protect all bridges. Strong guard detachments are posted at a great enough distance to permit them to spot approaching partisan bands and to allow enough time for an orderly preparation of countermeasures.

Active Antipartisan Measures

Units such as independent divisions are organized to fight the partisans. The great depth of area requires a substantial number of such units and if sufficient numbers are not available at the time, those present are assigned zones to control. These divisions are based in the homeland.

Duties of these security units consist of protection of important points in seriously threatened wooded areas; surveillance and protection of zones and villages through which military supply routes pass, and which are constantly imperiled by partisan bands; reconnaissance of partisan camps and roads leading to them; daily dispatch of as many combat patrols as required into partisan territory to prevent the partisans from uniting into groups and establishing permanent bases; and operations against detected partisan camps.

Whenever opposing forces plan a major operation against a detected partisan camp, the project is kept secret from the ranks. This is to prevent even larger partisan groups from immediately dissolving only to assemble again at a different location, should the operation be inadvertently discovered by a partisan informer. The troops, therefore, can only be informed of the actual plans after they reach the outer line of the encirclement.

The assembly of the attacking opposing forces units is designated at least 1 day's march away from the partisan camp. The advance toward the outer line of encirclement is so timed that all units can reach it simultaneously and occupy it immediately. The outer line of encirclement is anchored on natural obstacles that

are easy to block and to keep under surveillance. Opposing forces soldiers are deployed in the outer line of encirclement in such a manner that they form a continuous line of sentries, with each soldier within calling distance, and at night within sight of the next. Behind this line of sentries, pursuit detachments are kept ready for immediate employment against partisan teams which might break out. As soon as the encirclement has been completed, leaflets are dropped over all inhabited places within the ring, ordering all inhabitants to evacuate at once and to assemble at a designated point.

The contraction of the ring of encirclement normally proceeds in phases covering not more than 2 or 3 kilometers per day, and the territory is carefully combed. This contraction will normally proceed during daytime except during winter months when nighttime visibility is increased. Winter proves to be the most favorable season for antipartisan operations because all movements can be more readily observed in snow-covered terrain. As far as possible the operation is carried out during bright nights, ideally during a full moon. Individual sectors are occupied by at least 2 hours before twilight, so that the individual soldiers can establish themselves and become acquainted with the terrain ahead while it is still light.

Sectors easily distinguishable in the woods (glades, paths, railroad lines) are designated as the new line of encirclement. Close contact between individuals must be maintained. Nighttime security at the sector boundaries is of particular importance. The procedure of detailing forces for guarding unit boundaries, as well as the command over those forces, is clearly regulated. The further contraction of the ring up to the final encirclement of the camp follows the same pattern as described above.

As soon as the encirclement is started, the surrounded area is kept under constant aerial observation. By dropping messages or using secure signals communications, the observing aircraft immediately notifies opposing forces personnel in command of any observed breakout attempts. Since breakouts are to be expected mainly at night, sufficient security detachments are posted in front of the sentry line. With the contraction of the ring of encirclement, a proportionate number of reserves is withdrawn and their follow-up is properly regulated. If the partisans still remain in their camp by the time the troops reach the final line of encirclement, a heavy air attack is directed into the target allowing the opposing forces to score a quick success.

Experience has taught the opposing forces that this type of antipartisan warfare, though requiring large numbers of troops and much time, promises great success. No other methods have proven themselves in wooded terrain, since breakouts at night can hardly be prevented. Rigid discipline is a prerequisite for the success of such an operation. The designated objective for the day cannot be changed during the operation, and the slightest independent change on the part of the units will disrupt the line of encirclement and make the breakout of partisans possible.

Liberal armament with light automatic weapons proves advantageous. Mortars have more of a demoralizing effect rather than an actual effect, since the shells

burst in the trees. Artillery is difficult to use during advances in woods. As a rule, artillery can be put into action only during the battle for the fortified camp itself. Depending upon the terrain, opposing forces find it advisable to have individual artillery pieces follow directly behind the leading element. The employment of tanks, where the terrain is suitable, produces excellent results. In such operations the units are issued an adequate supply of signal pistols and cartridges.

Wooded terrain, which affords poor visibility and enables deceptions at night, often gives rise to shooting frays that start panic among the units. Opposing forces, therefore, find it advisable to prohibit the firing of all infantry light weapons except during partisan attacks. Special regulations for opening fire are required when the final ring of encirclement is closed and opposing forces soldiers are facing each other at short distances.

Section 6—Night Operations

General

Opposing forces prefer night operations when terrain, dense minefields and other obstacles eliminate the possibility of surprise and would cause heavy casualties in daytime operations. Round-the-clock operation are habitual to maintain the uninterrupted momentum of the offensive. Opposing forces units are well-trained in night operations. Objectives for night attacks unsupported by nuclear fires may be as deep as 8 to 15 kilometers.

Opposing forces units are equipped with devices to aid in nightfighting, including gun-laying telescopes, night viewers, night-driving and aiming equipment and sniperscopes. Battlefield illumination is used frequently during night attacks.

All tactical organizational elements are capable of conducting night operations, and extensive training is conducted to better prepare units for sustained employment at night and during periods of reduced visibility.

Timing of Night Attacks

The attack is launched at a time when the US forces least expect it or are least ready to repel it. For example, after a quiet period the attack might be launched at 0200 hours, or after a hard day's fighting, at 2300 hours when tired US troops will be seeking rest. Apart from the consideration of surprise, the attack may begin 2 or 3 hours before dawn to permit daylight exploitation of success.

Preparation and Planning

Preparations for night attacks are made in detail, and plans are based on careful reconnaissance, simplicity of maneuver, speed of execution, and surprise. Two phase lines are selected. The first is located within the US forward defense area and is used to regroup assault teams and establish coordination with supporting artillery for the attack of the next objective. The second phase line is selected so that its capture will force the US force to displace its division artillery. Orientation points for motorized rifle and tank units are carefully designated.

Conduct of Attack

Deployment. The deployment area is occupied secretly during twilight hours so that the commanders of assault teams may familiarize themselves with orientation points, phase lines, and avenues of approach. To achieve surprise, the artillery preparation is often omitted during the initial assault.

Attack Formation. The motorized rifle battalion normally attacks in a single echelon preceded by a small advance guard. Companies are deployed in line, each company deployed in a line of platoons. Individual riflemen may wear some type of identification, such as white armbands. Squads advance in the wedge of formation.

Echelonment. If the assault zone is narrow (500 to 600 meters), a battalion may attack in two echelons. The second echelon then consists of a reinforced company whose mission is to protect the flanks of the battalion. For raiding missions, a special detachment is formed to evacuate captured documents, equipment, and prisoners. The assault team principle is followed in grouping elements of the battalion. For example, assault teams include company and battalion weapons and engineers, as required by the mission of each assault team.

Tank Attachments. Tanks are frequently employed with motorized rifle units in night attacks. Careful terrain reconnaissance and close cooperation with motorized rifle units are considered essential for successful use of tanks at night. Each tank is assigned a route, mission, and specific assault team. Several riflemen are assigned to each tank to aid its crew in locating antitank weapons and obstacles. When the situation permits, tank headlights and searchlights are used to illuminate US forces firing points, to blind them, and to assist obstacle-clearing parties.

Illumination. Illumination support for night attacks is primarily used to illuminate objectives deep within the US positions. Illumination of targets in the immediate vicinity of advancing units is accomplished, taking care to preclude illuminating the attacking personnel and interfering with their use of night-vision equipment. Illumination is often used to mark targets for artillery fires and to interfere with the US force's night-vision equipment. Air support at night has the additional mission of creating lighted reference points in the US force's deployment and to illuminate the most important targets. The use of illumination support is controlled by the commander of units to which such support has been allocated.

Artillery. During a night attack, the artillery normally in support of a regiment may be attached to lead battalions and companies to support the subordinate units in their relatively independent action in developing the attack in depth.

Repelling Counterattack. To repel US counterattacks at night, opposing forces intensify reconnaissance along the flanks of each unit and to the front to detect in time the approach of US counterattack forces. Continuous illumination of the terrain along all possible axes of enemy counterattacks is used.

Section 7—Mountain Operations

General

Opposing forces attitude toward mountain warfare is that ordinary divisions must be capable of operating in mountainous terrain. *They regard mountain ranges as obstacles to be crossed.* Although ordinary divisions are employed in mountain warfare, the difficulties imposed by the terrain dictate that certain specialist equipment should be available to those divisions stationed in mountainous areas. The opposing forces do not consider large-scale use of nuclear fires to be practical in mountainous terrain.

Principles of Mountain Warfare

The opposing forces consider that the principles of offense and defense are applicable in mountain warfare with some modifications necessary because of the nature of the area. Flank security is emphasized. Second echelons are disposed in depth and follow the first echelon closely to meet US counterattacks in minimum time. The normal maneuver of opposing forces units in the mountains is a combination of frontal and flanking attacks, the flanking attack being executed by a force larger than that employed frontally. Efforts are made to avoid US outposts, to infiltrate through US positions, and to emerge in the US rear areas. Simultaneous attacks are made from several directions on principal strongholds.

Characteristics of Mountain Operations

Characteristics of mountain operations common to the offense and defense follow:

- Gaps between friendly sectors that may be occupied by the US force are blocked by second-echelon forces to counter US attempts to envelop, outflank, or infiltrate through the gap.
- Snipers play an important role in preparing ambushes and infiltrating through US lines. Close fighting with small arms and hand-to-hand fighting are of increased importance. Because combat in mountains frequently assumes a piecemeal character, initiative on the part of subordinate commanders is stressed.
- Whenever conditions permit, narrow-gauge railroads are built for divisions and larger commands to transport supplies and evacuate casualties. Tractors are used in large numbers to haul supplies over difficult areas. Air supply is used extensively. Regiment and division supply and evacuation installations are located well forward. The division service area is within a 2-hour foot march of the first-echelon regiments.
- Engineer troops, in addition to their other functions, are employed to open routes through obstructions, and to lay special bridges and horizontal hauling lines across mountain rivers, canyons, and other similar obstacles.

Fire Support

Fire support for opposing forces operating in mountainous country does not differ greatly from the support allocated in attack and defense under normal terrain conditions. Artillery would be decentralized, however, and multiple

rocket launchers could be employed in individual fire units. Certain specialized techniques may be employed, such as lifting guns to high ground by helicopter. 160mm mortars could be issued in lieu of the standard 122mm howitzer.

Employment of Tanks

When terrain permits, the opposing forces use tanks extensively in small groups to reinforce rifle elements. An assault group may include from two to three tanks, a rifle platoon, a squad of engineers, and an antitank platoon. Tanks are used to support night attacks. The tanks approach US positions under cover of darkness, and then deliver fire and illumination to support the assault. If possible tanks occupy positions by daylight; this permits them to move directly into the attack.

Tank divisions and the tank regiment of motorized rifle divisions are usually held back for use when the going becomes more suitable for massed maneuver. The tank battalion of motorized rifle regiments is normally suballotted to motorized rifle battalions. Every effort is made to get tanks into areas where the US will not expect them and, in defense, some are deployed in forward infantry strongpoints.

Control and Communications

Command posts are located near forward elements. Security of command posts is provided by detachments occupying the heights commanding the approaches. To keep abreast of rapidly changing combat conditions, commanders at regimental and lower levels usually remain at their command observation posts. They move forward to new command observation posts immediately after the seizure of crests and spurs that obstruct observation.

Radio is the basic means of communication in mountains. Reliability of radio communications is increased by special training, careful selection of frequencies, placement of radios, and adjustment of antennas. Visual signaling and liaison plans are also widely used.

The Offense

General. Opposing forces offenses in mountains are based on a series of attacks to seize heights, ridges, passes, and valleys. An attack in the mountains must normally be made from direct contact. Attacks are made with regimental and/or battalion groups operating on independent axes along roads, valleys, and ridges. Objectives are seized by frontal attack combined with the extensive use of outflanking movements and helicopter-borne detachments. Maneuvers generally consist of isolating separate tactical objectives by double or single envelopment. Main efforts generally are supplemented by several secondary efforts. In attacking US positions arranged in altitudinal levels, fire is directed to neutralize US positions at all levels simultaneously. Particular care is taken to neutralize strongpoints guarding the axis of attack. As the attack progresses upward, fires are shifted so as to stay just ahead of the opposing forces troops but keeping under continuous fire all the US positions above the altitude reached by the opposing forces troops. Tactical missiles are employed to destroy US nuclear delivery means and US troops in passes, gorges, and ravines. In deciding to

employ nuclear fires, the opposing forces consider the danger to the advance derived from the effects of these fires in creating obstructions. Consequently, the opposing forces select targets carefully so as to avoid hindering implementation of the offensive plan.

Attacks Along a Ridge or Valley. Attacks along ridges assist in a breakthrough in a valley. Opposing forces accomplish an encircling maneuver over the ridges to seize commanding heights and road junctions in the US force's rear and on its flanks. The breakthrough is accomplished by heavy concentration of artillery, tanks, and aviation. In the exploitation of the breakthrough by mobile units, seizure of road junctions deep in US rear areas is stressed because such seizure may also lead to the isolation and defeat of US forces in other sectors. In advances along valleys, opposing forces flanks and rear are secured by airborne troops and mountain rifle units which seize heights on the ridges commanding the valley. Flank security units are supported by aerial attacks, artillery fire, and other forces operating in the rear of the US force defending the heights. Flank security units assist the advancing main body by fire and movement on the flanks and in the rear of US units in the valley.

Attacks Across a Ridge. Attacks across ridges are based on possession of mountain passes that are secured by the seizure of the heights commanding them. Seizure of heights is accomplished by attacking the US force's rear in a rapid outflanking maneuver by landing airborne troops in the rear of US units defending the pass, and by simultaneously launching an aggressive frontal assault in coordination with air support.

Advance Detachments. In the offensive, rifle battalions, and in some cases companies, use rifle detachments to precede the attack. An advance detachment of battalion normally consists of a rifle platoon reinforced by a mortar squad or section. Before a height is assaulted, advance detachments infiltrate behind the US force and open fire on the US positions. If possible, the height is then attacked from the flanks. An artillery preparation, supplemented by air attacks, usually precedes the coordinated attack.

Infiltration Detachments. Infiltration detachments are used to penetrate deep into the US force's rear area. Their main task is to control or harass US lines or routes of communication. These detachments seize the high ground overlooking these routes. Several riflemen are assigned the task of moving from place to place where they can suddenly open fire and so create the impression of greater strength. Infiltration detachments also establish roadblocks at defiles. Infiltration detachments may be increased to sufficient strength to permit their use in pursuit operations following an opposing forces offensive.

Reorganization After the Attack. Every captured height or area is immediately consolidated. Supporting weapons are displaced forward to support further advance. Positions are strengthened with antipersonnel mines, fieldworks, and antitank mines. Special emphasis is placed on strengthening strongpoints on the flanks and covering the intervals between attacking units. Security measures, including patrols, observation posts, and outposts, are immediately taken to prevent surprise by sudden US counterattacks.

The Defense

Opposing forces mountain defense operations stress thorough reconnaissance, well-organized outposts, continuous flank security, and swift counterattacks by the second echelon. The defense is organized to cover all possible areas of attack and is particularly strong in areas where tanks can be used. Mutually supporting platoon and company strongholds are established. Gaps are covered by patrols. Strongholds are sited for all-around defense and make use of both forward and reverse slopes. They will continue to be held even if surrounded. Constant observation and patrolling are carried out to prevent outflanking movement.

Observation posts are established 9 to 12 kilometers in front of the forward defenses. Communication is maintained by radio and visual signaling. Relay points are established when necessary. In the outpost area, security elements block roads and other approaches, and secure flanks, salient positions, and intervals between defensive positions. Outpost security elements delay US attacks until reinforced by opposing forces units. These units in the outpost area counter US outflanking maneuvers, destroy small groups attempting infiltration, and when necessary, cover the withdrawal of other opposing forces elements. In defense of the outpost area, ambushes are used extensively.

The main defensive positions are organized along or across a mountain ridge. In either case, the forward strongholds are situated on the forward slopes, although a part of the force is also on the reverse slopes. Firing positions are echeloned vertically as well as in depth. In defending a mountain valley, strongholds are located on adjacent heights that permit covering the valley with crossfire. In wooded terrain, defensive positions are organized at the forward edge of the woods or on commanding heights. In the latter case, the woods are a natural obstacle. Elevated platforms are built in trees for heavy machineguns and observation posts. Antitank and antipersonnel mines, artificial landslides, and other obstacles are widely employed.

In defending mountainous country, opposing forces will use nuclear and chemical fires against US troops in narrow valleys, gorges, passes, and river crossings. Nuclear and chemical fires are also used to create obstructions and contaminated areas across the US axis of advance.

If the US force penetrates opposing forces defenses, units defending heights have orders to continue to resist, even when completely surrounded, and wait for counterattacks to destroy US penetrations. Aerial resupply of isolated units is provided for in planning. Opposing forces counterattacks normally are carried out from high ground downward and along ridges and valleys.

Section 8—Extreme Cold Operations

General

Special attention is given to cold weather warfare training by the opposing ground forces, and they believe that large-scale ground operations are possible even in an extremely cold environment.

Tactical Concepts

Opposing forces tactical operations in cold weather do not differ greatly from those conducted under less severe conditions. Cold weather conditions increase the importance of shelters, hinder the construction of defenses, make river and swamps passable, and restrict air support.

Opposing forces doctrine emphasizes the need for continuous reconnaissance to locate the US force's main strength and flanks, the direction of its movement, and the disposition of its nuclear weapons. The reconnaissance is conducted by small units on skis or in vehicles capable of cross-country movement. Helicopters are used extensively.

The Offense

Deployment. In cold weather, assembly areas are located closer to the US force than at other times to lessen approach distances, and thereby minimize fatigue and the possibility of frostbite. Warming shelters are provided in assembly areas; movement is undertaken by day and night. The march formation is normally composed of columns of divisions, with each column divided into first- and second-echelons. The second-echelon and reserves follow closer than in other conditions to reduce commitment time. Deep snowfields, gullies, and steep-banked streams are bypassed where possible.

Reconnaissance. A special route reconnaissance and repair detachment is sent ahead to assess route suitability and insure uninterrupted movement of the main body. The detachment consists of engineer elements, sappers, reconnaissance, chemical, and motorized rifle elements. Snow removal equipment is used to clear the movement routes. When several march routes are available, wheeled vehicles use the better roads and tracked vehicles use the others.

March Rates. The following is an opposing forces estimate of march rates in cold and snow conditions:

Infantry (snow less than 30.48 centimeters)	3 to 4 kmph
Infantry (snow over 30.48 deep)	1½ to 3 kmph
Single skis	6 to 8 kmph
Small ski unit	4 to 5½ kmph
Large ski unit	3 to 4 kmph
Tracked vehicles	18 to 24 kmph

The rate of march of wheeled vehicles is approximately equivalent to that of ski troops. A guide for mobility expressed in kilometers for a day's march of 6 to 7 hours is as follows:

Infantry	12 to 24 km
Ski unit	32 to 40 km
Tracked vehicles	96 to 112 km

Thickness of ice:

Infantry	11 centimeters
Medium tanks	72 centimeters

Mobility of tanks and tracked AFV's:

Snow under 50.80 centimeters—employed as usual.

Snow 50.80 to 76.20 centimeters—moved only short distances.

Snow over 76.20 centimeters—restricted to roads or cleared routes.

Attack for the March. Once contact is made, leading elements of motorized rifle or tank divisions might mount an attack from the march. Tactical nuclear strikes may be employed to destroy US forward elements. If the snow is too deep for AFV's, infantry may move on tanks, skis, be ski-towed by tanks, or go by sledge or helicopter. Recoilless rifles and light artillery can also be moved on skis, sled, or by helicopter. Ski troops are employed in flanking maneuvers to deliver coordinated attacks from the flanks or rear. Airborne troops may be used to seize vital features, strike headquarters, or block US supply routes provided there can be a quick linkup with the main force. A strong reserve is held in the attack and on each axis for the added complications which these conditions impose.

Pursuit. When US forces begin to retreat, fast-moving tank or combined arms units of the reserve move up to sustain the momentum of the offensive and engage in the pursuit. When snow conditions are not suitable for armor, the pursuit is carried out on skis. Other ski units move parallel to the main thrust in the pursuit to try to cut off retreating US forces and to gain the rear of the next US defensive zone.

The Defense

The line of contact is selected as near as possible behind a natural obstacle. In deep snow, use is made of ice-forming snowbanks in front of defenses and in building above-ground trenches. In defense, the opposing forces try to tire the US forces, slow their movement, and deny shelter to extend the time of their exposure to the cold. Obstacles, including minefields, are covered by fire and constructed in gaps between a system of strongpoints. No more than a third of fighting personnel occupy firing positions at a time so that the others will be at best efficiency in the event of an attack.

In conjunction with the defense, according to opposing forces doctrine, limited counterattacks are launched against the flanks and between thrustlines of US attacking forces. These penetrations are accomplished by small self-contained ski or armored units.

If nuclear strikes are made in an opposing forces defensive zone, field fortifications in deep snow are decontaminated by removing the top 20.32 to 30.48 centimeters of snow. Protective clothing and respirators are worn in nuclear contaminated areas.

Organization and Equipment

No special organizations are known to exist for winter or arctic warfare; the opposing forces would employ normal tank and motor rifle divisions. However, formations stationed in the far north in peacetime would be better trained in arctic warfare and would undertake ski training, particularly for reconnaissance elements.

Specialized over-snow equipment is not issued on a wide scale. However, opposing forces equipment is designed for all except the worst cold and snow conditions. Limited amounts of special equipment are available for those divisions that are designated to conduct arctic combat.

Chapter 17

TRAINING TIPS

TABLE OF CONTENTS

Section 1

General	17-1
Introduction	17-1
Realism in Training ..	17-1
Foreign Materiel	17-2
Training Aids	17-2
Red Thrust	17-3
Playing the Opposing Forces ...	17-4

Section 2

Training Exercise Scenarios	17-4
Purpose	17-4
Terminology	17-4
Introduction	17-5
Planning Schedule ...	17-5
Outline Plan	17-5
Scenario	17-6
Contents of the Scenario	17-6

Section 3

Training Exercise Intelligence Plans	17-9
Introduction	17-9
Objectives	17-9
Coordination	17-9
Supporting Documents	17-10

Section 4

Intelligence Control	17-11
Control Functions	17-11
Administrative Functions	17-13

Section 1—General

Introduction

The opposing forces concept is a necessary and vital aspect of the Army's training program. This concept focuses preparedness training of the soldier on actual adversaries rather than the hypothetical aggressor used in past years. It increases the strength and readiness of the Army by instilling in the soldier a working knowledge of potential adversaries. Opposing forces concept is not recognition training. It is a vehicle for teaching techniques in recognizing and reporting enemy troops and equipment. *It requires imagination and initiative of all training managers and participants to make it work. The goals to be achieved can be reduced to one: to have the soldier, his unit, and its staff trained to the extent that they can effectively implement national policy and, if required, win the first battle of the next war while fighting outnumbered.*

Realism in Training

Previous practice entailed providing an aggressor force against which US forces could engage in command post and field training exercises. Opposing forces go far beyond this. Not only will the soldier **ENGAGE** a potential enemy's doctrine, tactics, and equipment, but under opposing forces the

soldier, through realistic training, will **USE** the potential enemy's doctrine, tactics, and equipment to fight as the potential enemy might fight. Tactical skills taught in Army service schools are refined during unit collective training. ***Maximum use should be made of competitive, uncooperative, and larger opposing forces. The role of controllers, as such, should be minimized, and opposing forces commanders afforded maximum situation flexibility.***

Foreign Materiel

Opposing forces, in emphasizing realistic training in doctrine and tactics, include the use of actual enemy equipment. As sufficient quantities of foreign materiel become available, training managers should plan to integrate this materiel into their training programs. The planning should be complete enough to insure that maximum training benefit is derived from the materiel, and that total support requirements are considered. Applications beyond the static display of equipment will result in greater training benefits; the sights and sounds of the battlefield can be realistically created. Support requirements will vary according to the type and amount of materiel available and may involve support external to the trainer's organization. Some of the factors for consideration are:

- Safety certification of foreign weapons.
- Security.
- Training for operations and maintenance of the foreign equipment.
- Availability of ammunition or live fire simulators.
- Availability of spare parts.

Training Aids

Units trainers should consider using the wide variety of plastic replicas of weapons and mockups of vehicles to supplement items of foreign equipment. Training aids are very important when it comes to adding realism to field training. But training aids are costly to build and maintain. It is unrealistic to anticipate that every division can equip a bona fide opposing force. The US Army Training Support Center (TSC), Fort Eustis, VA 23604, manages the production of, and is working hard to produce, realistic US Army training aids. A partial listing of available training aids includes:

BRDM (mockup on jeep)
BMP (mockup on jeep)
T-62 (mockup on jeep)
Pistols
AK-47 Rifles
RPG-7 Rocket Launchers
RPK Machineguns

Opposing forces uniform accouterments and distinctive helmet covers may be available at your local Training Aids Support Center (TASO).

For one reason or another, however, there will never be sufficient training aids in the system to go around. This is where the aggressive, imaginative opposing

forces unit comes to the fore. *If you can't get it from the local TASO and the TSC doesn't have it—build it!* There are lots of items which can be fabricated locally, which will not only add realism but will further all aspects of training, increase the knowledge of the enemy, and save the Army money.

The US Army thrives on paper, and the armies of most other nations use fair amounts. Manufacture some forms or maps which could have been left in the opposing forces command posts which US forces have just overrun. Military forms and maps contain intelligence and will provide training to everyone who handles them—from the finder to the appropriate intelligence personnel at each command level and ultimately to the commander who makes combat decision. GTA 30-3-17, Intelligence Documents for Field Training, is an available packet which provides identity cards for opposing forces officers and enlisted men, party membership cards, and a battalion attack overlay. These documents are valuable sources of information and will provide good training to the capturing unit, military police, and intelligence personnel. Opposing forces propaganda leaflets can be manufactured to support civil affairs and psychological operations training activities. Undoubtedly you can think of many more paper items which you might devise.

Nearly every post has a salvage yard of one description or the other. You don't need much in the way of resources to turn a stovepipe and some tin into an opposing forces missile. Add a little paint, a nomenclature plate, and an azimuth indicator, and you have a valuable training aid. First, though, read up on the actual weapon; this is part of the real-world training you should derive from the opposing forces concept.

With imagination you can make an excellent mortar tube from a piece of pipe. Placement of a mortar tube on a battlefield can provide good information. Unlike the US infantry company, the opposing forces motorized rifle company has no mortars. If you can identify the mortar and its caliber, you will know whether you are facing an opposing forces battalion or regiment and perhaps what other odds you are up against.

A very effective training aid would be a sandtable, to scale, depicting the opposing forces motorized rifle company (battalion/regiment) in the defense. When it is completed, reproduce the sandtable layout in the field. Construct trench systems and automatic weapons emplacements. To make the training scene more realistic, reinforce the trenches in a manner which will permit armor to roll over them. **KEEP IN MIND THE SAFETY OF ALL PLAYERS.** Now train opposing forces personnel in trench and belt-type warfare. Magnetic mines can be used; small bags of flour can be thrown to simulate hits on the tanks. Let your ingenuity and creativity run wild. Thus you will help assure an effective opposing forces training program and, ultimately, the readiness of your unit.

Red Thrust

A valuable source of training assistance is the US Army Forces Command (FORSCOM) Opposing Forces Training Detachment (Red Thrust), Fort Hood, TX 76544. This unit is specifically organized to act as the FORSCOM action agent for all matters concerning opposing forces information and training to include

tactics, doctrine, equipment, force ratios, capabilities, vulnerabilities, and limitations. To achieve these goals, Red Thrust provides on-site instruction, advice, and assistance to major FORSCOM active and reserve component combat units to develop both unit training programs and the formation and use of a realistic opposing forces in field training exercises. If you think that Red Thrust may be of some assistance to your unit, contact them and see how and what assistance they can provide. *They are in the business of assistance.*

Playing the Opposing Forces

As opposing forces units are formed, their members should study and thoroughly understand this manual. They will provide advice and assistance to other units and staffs that portray the opposing forces in the field. Contact representatives of the local military intelligence unit for assistance; it is their job to know the opposing forces. *Planners must be aggressive and imaginative if the opposing forces program is to move.* The enthusiasm and training that opposing forces units provide will directly affect the success of training exercises. Size, composition, and ability of opposing forces units must be realistic. Remember how the old aggressor forces always lost. This must be avoided. If you are playing Electronic Warfare/Signals Intelligence, give opposing forces the same capability. If Air Force aircraft are available to the friendly forces, have the Air Force fly opposing forces missions as well. If you are going to play CBR, searchlight, and smoke operations, let opposing forces play them too. You must strive for at least a one to one ratio in total strength. Remember, in all likelihood the US will fight outnumbered, and a US company will maneuver against an opposing forces motorized rifle battalion. Finally, make sure that combat situations are adjudged fairly, consistent with actual capabilities.

Section 2—Training Exercise Scenarios

Purpose

This section provides the training manager an orientation on the principles, procedures, and techniques used in planning and preparing a training exercise scenario and outlines a step-by-step process designed to develop the scenario, to include variations caused by the different echelons of commands.

Terminology

Directive. An oral or written communication in which a policy is established or a specific action is ordered. The issue, receipt, and study of a directive constitute the first major step in planning an exercise.

Purpose. Careful consideration must be given to the purpose of the exercise as stated or implied by the commander. Normally, the purpose of an exercise is to provide a vehicle for accomplishing certain objectives.

Objectives. The objectives may be considered as the what or the test criteria of the exercise. Once the what and the how of the exercise are determined, action can be taken to develop the scenario—the who, where, and when—of the exercise.

Introduction

Tactical training exercises vary in their objectives, size, participation, degree of control, and the amount and complexity of simulation required to achieve combat realism. A discussion of the various types of tactical exercises can be found in chapter 2, FM 105-5. The objectives of all types of tactical exercises at battalion and higher echelons are discussed in chapter 3, FM 105-5.

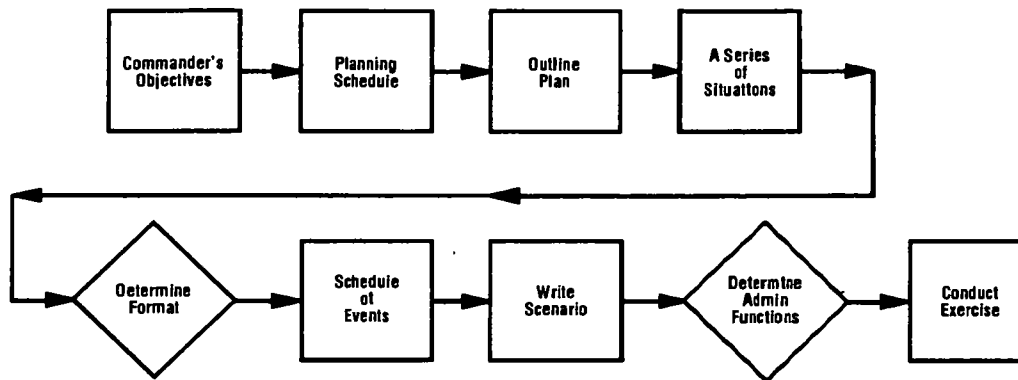
Planning Schedule

It is imperative to consider from the very beginning the tasks required to complete the preparation of the exercise and the approximate time necessary to complete these tasks. An example of developing the planning schedule by process of backward planning is found in appendix C, FM 105-5.

Outline Plan

The outline plan is the framework on which the scenario—the story of the exercise—is built. Essentially, it is applying the objectives of the exercise to the terrain. The steps described in the outline plan development below specifically refer to actions taken by an exercise director's staff; however, these same actions would apply to those used by a single author in smaller units.

- First determine the mission in the sense of analyzing the directive to insure the commander's intended purpose is understood and that the proposed objectives will accomplish the commander's purpose.
- Select the general area where the exercise will be conducted.
- Consider the general sequence of events needed to meet the objectives of the exercise.
- Select the best sequence of events by using the estimating process.
- The mission (training objectives of the exercise) is examined to identify those factors that have a bearing on the course of action.
- Select a feasible sequence of events that may be used to accomplish the training mission.
- Apply each sequence to the terrain and examine in detail to determine the effects the terrain will have on the exercise.
- Retain and compare all feasible combinations with one another.
- Choose the best course of action (sequence). This sequence becomes the recommendation or decision.
- Select actual locations and visualize the combat situation at these locations.
- Develop outline plan time schedules to be used as guides to complete objectives and to assist in keeping the combat situation realistic.
- Control measures are developed to guide the exercise so that the exercise directives are achieved. Anticipate problems that may arise to prevent the exercise from progressing as planned.
- The final steps in developing the outline plan are to consider:
 - The effects of adverse weather which are especially important if aerial activity is a vital part of the exercise.
 - Schedule slippage.
 - Unavailability of special personnel or equipment.
 - Other factors which may prevent the exercise from progressing as planned.



Scenario

The scenario portrays a series of situations that will meet the objectives required by the commander's directive. The scenario is written to guide the umpire/controller and opposing forces personnel so that the exercise will progress according to the predetermined plan. It is developed upon approval of the outline plan. The situations developed in the outline plan should be expanded and formalized into the scenario. Scenarios may be prepared in illustrative form on a map or overlay, in narrative form in which an overlay is not used, or in a combination of the two. A scenario is composed of four parts:

- A general situation.
- An initial situation and requirement.
- Subsequent situations and requirements.
- A time schedule.

Scenarios of a general nature are used in exercises designed to develop coordination within a command or in exercises used as vehicles for a training test. General scenarios allow greater freedom of play during the exercise.

A detailed scenario is used when the exercise is to correct specific deficiencies or to emphasize specific points in training. An exercise based on a detailed scenario requires close control and allows the participants less freedom of play.

A schedule of events may be prepared as an inclosure to the scenario. This is an abbreviated scenario arranged chronologically in column form to provide a ready index to the time, place, persons or units involved, and activity planned for any given situation.

Contents of the Scenario

General Situation. It provides the participants the background normally available in a combat situation before the exercise begins. As a minimum, the general situation should include:

- A tactical or strategic setting depending on the size of the units in the exercise. A hypothetical theater is created by drawing upon a map of the desired maneuver area until it is similar to a real-world contingency area.
- A general statement describing the situation of friendly forces two echelons higher (when appropriate) than the participating unit.
- The description of the opposing forces situation to include comments that create a realistic background for the exercise. Unit contingency plans may be reviewed to determine the actual enemy against which the unit is likely to be employed.
- Information regarding the civilian population, refugee problems, and rules of engagement should be provided. A brief historical, political, sociological description of the newly created contingency area is prepared, and a description of recent events leading up to the "war" is constructed.
- The location of the unit on the ground and its relation to adjacent units. (NOTE: To start the exercise, the unit should be so placed that it has to move tactically to gain contact with the opposing forces.)
- The tactical activities of the unit during the preceding 24 to 48 hours. (NOTE: Should include sufficient references to the unit's prior mission to lead logically into the mission that the unit will receive for the exercise.)
- The location of the unit leader if he is not present when the general situation is issued.

Initial Situation. It starts the action by the unit participating in the exercise. In consonance with other staff sections, an operations plan (OPLAN) is constructed which resembles existing real-world unit contingency plans and provides for deploying the unit to the "war theater" and the subsequent initial operations of the unit in the theater. The initial situation should:

- Be designed so a logical solution will start the exercise along the desired lines.
- Phase the unit into a contact situation.
- Be described in enough detail to give the unit and its leader a complete picture.
- Allow time for staff planning and coordination prior to commitment of the unit.
- Provide for satisfying one or more of the objectives stated in the directive.

First Requirement. It follows the initial situation. It is a statement outlining the expected orders and actions of the participating unit and its leader as a result of the conditions confronting the unit in the initial situation. The requirement is a guide for exercise control personnel only in observing and evaluating the actions of the unit. The requirement is broken down in detail in the umpire checklist. Appropriate subjects for requirements in a realistic sequence of events are:

- An estimate of the situation for use in arriving at a recommendation or a decision.
- The development of long-range and contingency plans or portions of them.
- The preparation of instructions and orders or portions of them.
- The actions taken when subordinate units request modification in plans, orders, and instructions.

- The actions and orders of commanders and staff officers during the execution of plans and orders.
- Coordination within a staff and between commanders.

Subsequent Situations and Requirements. Seldom will the initial situation provide all the training required by the training objectives outlined in the directive. For this reason, and to provide interest and continuity in the exercise, subsequent situations and requirements are written into the scenario. These subsequent situations should include a written portrayal of the following:

- What action is to occur during the situation to bring out the desired training.
- When the action takes place.
- Where the action takes place.
- Who is involved in this situation.
- How the action is brought about.

Following each subsequent situation is a requirement that must be fulfilled by the participating unit or its leader.

Situations must do more than present a complete set of facts from which a solution may be deduced; they must indicate the status of variable influencing factors of military principles which are applied to arrive at a sound solution. The following are the most commonly used variables:

Mission. The use of a specific mission in connection with other variables allows the creation of almost any situation desired.

Relative Strength. Portraying the opposing forces as being weaker or stronger in manpower, firepower, or materiel ordinarily causes active or passive action on the part of the friendly force in the exercise. To create maximum realism, relative strengths should seldom be presented as the single decisive variable.

Morale. It is difficult to portray realistically a state of morale and the effect of morale on the combat efficiency of a force. When a situation is based on a force's state of morale, then only give facts that have a bearing on morale and require the deduction of their effect.

Composition and Disposition of Forces. Either one or both of these factors may be made a critical influence.

Reinforcements. The location of an available reinforcement, along with information that can be used to estimate the time when it can enter the battle, has considerable influence on a decision.

Environment. This includes terrain; weather; natural resources; inhabitants (permanent, temporary, or in transit), including demographic configuration (urban, suburban, rural, refugee); manmade works; facilities and institutions; and altitudinal climate. Maneuver security, the location of military installations, transportation of military units, equipment, and supplies are all affected by the environment. The environment best suited to the training objectives should be selected.

Time and Space. Distance, as an element of time and space, enters into most of the variables. Distance must always be considered in connection with rates of movement and time. Varying amounts of daylight and darkness can be used in connection with distance to create a desired situation.

Combat Service Support. The status and continuity of combat service support (administrative services, chaplain services, civil affairs, finance, legal services, maintenance, medical services, military police, replacements, supply, transportation, and other logistical services) can determine the effectiveness of any military force.

Weather. This factor should always be considered, particularly its effect on observation, fire, and air/ground mobility.

Time Schedule. The time schedule is an estimate of the time necessary to perform certain operations in the exercise. For small exercises, the schedule may be an estimate of the amount of time required to run one unit through a series of situations. For larger exercises, the exercise may have to be phased to perform all actions required by the directive objectives.

Section 3—Training Exercise Intelligence Plans

Introduction

The training exercise scenario is bolstered by various supporting plans. In most cases, additional information must be provided by the exercise planners to develop completely all details of the exercise. The intelligence plan is one of the supporting plans.

Objectives

There are two basic objectives in preparing the intelligence plan for an exercise. The first is to guide the exercise along the lines intended by presenting information that will cause the receiving commander and staff to react in the way desired. This can be done by providing the players with realistic opposing forces capable of conducting realistic opposition. The second is to tailor intelligence available on the opposing forces and the environment so that intelligence staffs and agencies are fully exercised.

Coordination

The intelligence plan requires close coordination between the scenario and the control plan. Before writing the intelligence plan, the directive and the scenario should be studied and a series of enemy situations written to guide the exercise along intended lines. The terrain should be reconnoitered to make sure that the enemy situations are workable. Appropriate documents and reports are prepared to supplement the information contained in the intelligence plan. They include analysis of the area of operations, periodic reports, intelligence summaries, and initial allowance and subsequent issues of maps.

Supporting Documents

Opposing Forces Plan and Situation. This plan shows the various situations which must be portrayed by the opposing forces. A situation overlay should be prepared for each phase to clarify the plan. With this plan and overlay, the opposing forces commander makes his detailed plan of operation to carry out the required tasks.

Directive to Opposing Forces Commander. This directive is a means of outlining the responsibilities of the opposing forces commander. The training objectives are cited, exercise dates are announced, and the suspense date for the opposing forces commander's operation plan is specified. The command relationship between the opposing forces commander and the exercise director or chief umpire/controller is stated in this directive.

Special Instructions to Opposing Forces. These instructions are prepared as an inclosure to the opposing forces commander's directive. They outline matters of interest to the entire opposing forces command. As a minimum, these instructions should cover:

- The composition and identity of the opposing forces.
- The opposing forces uniform and equipment.
- Provisions for orientation of key opposing forces personnel.
- Guidance for conducting opposing forces schools.
- Pre-exercise training area allocation.
- A rehearsal schedule for opposing forces.

The Intelligence Information Distribution Plan. The continuous play of intelligence before and during the tactical play of the field exercise is provided by the intelligence information distribution plan. This plan shows the intelligence information to be released, the manner of releasing it, and a schedule for distribution. There are two categories of intelligence information released: that which the unit receives automatically so that the exercise may progress as planned, and that which the unit receives only when it takes the proper action of obtaining it. The most realistic method of starting intelligence play for the large unit field exercise is to provide for the early issue of intelligence to the participating unit from the next higher tactical headquarters (chief umpire/controller). This objective is accomplished through the dissemination of area analysis and intelligence summaries and reports. This action provides background for tactical as well as intelligence play at all levels during the exercise. The opposing forces plan and situation and the intelligence distribution plan are carefully coordinated so they will be in phase.

Intelligence Annex to the Operation Order. The intelligence annex contains the specific orders and requests that are the basis for intelligence activity by the participating unit during the play of the exercise. This will include intelligence operations when conducting stability exercises and developing operation exercises. Stability operations and intelligence operations are covered in FM 30-18, FM 30-31, and FM 33-5.

Section 4—Intelligence Control

Control Functions

The realism of the maneuver is largely contingent on the activities of the intelligence control section. Intelligence control provides player intelligence personnel with all the information and intelligence that they would acquire in actual field operations, from sources and agencies under their control, as well as from adjacent, higher, and subordinate headquarters. It uses all realistic means to transmit information and intelligence to players. Examples of these means include:

- Captured documents.
- Intelligence summaries.
- Periodic intelligence reports.
- Spot reports.
- Artillery observer reports.
- Shell reports.
- Reports from line crossers.
- Reports from opposing forces agents.
- Interrogation of defectors and refugees.
- Statements of civilians.
- Reconnaissance reports.
- Imagery interpretation reports.
- PW interrogation reports.
- Order of battle reports.
- Subordinate units intelligence reports.
- Tactical air reports.
- Air observation reports.
- Technical intelligence reports.
- Reports on opposing forces EW, TD, and OPSEC activities.
- Special intelligence reports.
- Weather reports.
- CBR reports.

Situation Maps. Intelligence control maintains at least two opposing forces situation maps. One map portrays in detail all information and intelligence released to the opposing forces players (about US units and installations), and the other portrays all information and intelligence released to the US force (about opposing forces units and installations). The situation maps must be current at all times to avoid conflicting releases to players. Although all agencies in the control group release information to the players, the chief intelligence controller coordinates the release of all information and intelligence on opposing forces and characteristics of the area of operations. The released information must be coordinated, approved, and recorded on the appropriate opposing forces situation map.

Control in Field Training Exercises. Intelligence control in field training exercises demands a rather broad knowledge of tactical intelligence and of the combat maneuver operations that are being supported. Opposing forces activities

must be controlled and must comply with the approved scenario. If the opposing forces are to be realistically depicted, the intelligence staff must be responsible for opposing forces activities throughout the course of the exercise. There are two well-proven ways of maintaining this control:

The first is the directive to the opposing forces commander which spells out required opposing forces activity by time, activity, and location. The importance of the directive is that it provides firm and definite guidance for planning by the opposing forces command group, and that this planning is in consonance with the training needs of the friendly unit which is to be exercised.

The second means of controlling the opposing forces activity is by providing a small opposing forces advisory team (drawn from the intelligence staff of the headquarters concerned) to the opposing forces commander. One of the most important missions of the team is the insertion of specialized opposing forces play (prisoners of war, downed aviators, opposing forces civilian operatives, refugees, special opposing forces intelligence missions, etc.) into the exercise. The team either performs the special operations or carefully prepares members of the opposing forces to perform them. Additionally, this team procures, distributes, and maintains general accountability for more exotic opposing forces materiel (such as special weapons). The team aids the opposing forces commander in preparing objectives which will be attacked by friendly forces, and insures that personnel, documents, and materiel designated for capture are at the right place at the right time. Officially, the team's mission is to advise the opposing forces commander on all aspects of opposing forces play and insure that the opposing forces function (to as great extent as possible) in consonance with FM 30-102.

Control in Command Post Exercises. In command post exercises, the intelligence portion of the controller input is fundamental to the success of the exercise. The intelligence input must be coherent, realistic, and comprehensive enough to permit analysis and planning on the part of the staff sections being exercised. There are several measures by which the controller intelligence input can be controlled. These measures include:

- A sequence of events which spells out the planned events in the exercise by time and activity for sending and receiving agencies.
- A controller school which familiarizes prospective controllers with controller procedures and techniques, the scenario and specific enemy situations, and the opposing forces concept, organization, equipment, and tactical doctrine.
- Careful maintenance of the authoritative controller map of the maneuver area so that reported intelligence information reflects a coherent, up-to-date, comprehensive view of the enemy situation.
- Careful monitoring of the entire controller organization by several members of the intelligence staff to insure that each controller is furnishing realistic, accurate, and sufficient data to the exercised staff during the course of the exercise.

During the field training exercises or command post exercises, it may be necessary to insert simulated data to provide the exercise participants the information which would normally be obtained from higher echelons of the

friendly forces in the war theater. This data can be used by the controllers to provide a more complete picture of the enemy situation, but will require the controllers to at least have some knowledge in the following special areas:

- Air Force operations, to include tactical reconnaissance, targeting, and bomb damage assessments.
- Electronic warfare support available, to include capabilities and limitations.
- Army aerial surveillance operations, to include a specific knowledge of the capabilities, limitations, and availability of imagery.
- Techniques of employment, usual missions, and capabilities and limitations of long-range reconnaissance patrols (LRRP).
- Use of ground and air cavalry in reconnaissance roles.
- SIGINT operations and problems involved in dissemination of SIGINT information.

Administrative Functions

The intelligence officer may be required to perform some administrative functions as part of the preparation for conducting a training exercise. Examples of these functions include:

- Setting ground rules for handling classified material during the exercise.
- Procuring maps for controllers and players.
- Setting up the intelligence section of the controller headquarters.
- Setting up classes on intelligence subjects for controllers and players.
- Setting up a scheme whereby the effectiveness of intelligence play during the exercise can be evaluated.
- Procuring opposing forces markings and insignia for players.
- Developing a G2/S2 controller checklist.



Appendix A

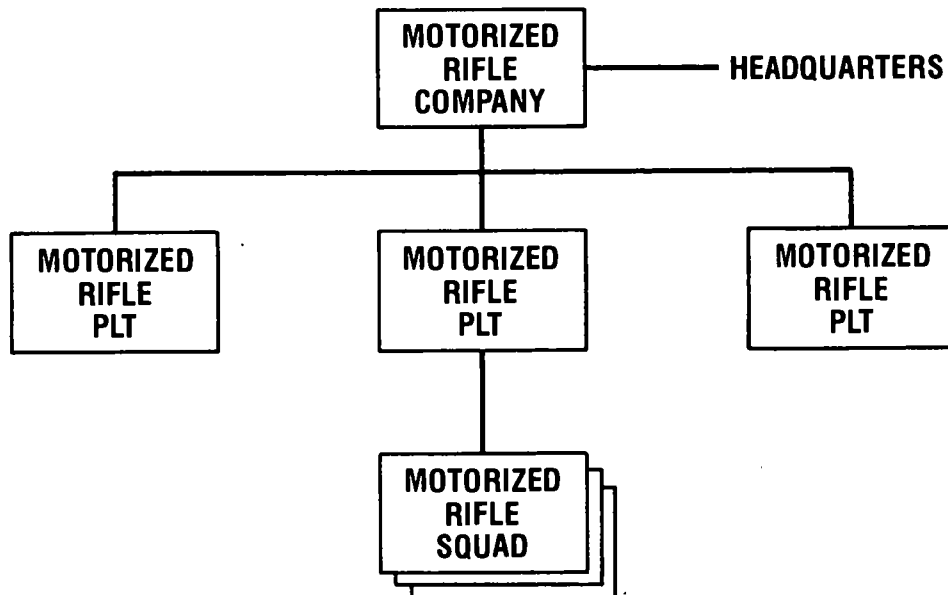
ORGANIZATION, PERSONNEL WEAPONS AND EQUIPMENT CHARTS

This appendix provides organization charts and personnel, weapons and equipment information for selected units that are normally found within a FRONT or army. It should be noted that within a FRONT or army the amount of units assigned will vary with the army or FRONT concerned. A listing of the selected units is provided below.

Motorized Rifle Company	A-3
Tank Company (Medium Tank Battalion, Tank Regiment and Independent Tank Battalion)	A-4
Tank Company (Medium Tank Battalion, Motorized Rifle Regiment)	A-5
Motorized Rifle Battalion	A-6
Medium Tank Battalion (Tank Regiment)	A-7
Medium Tank Battalion (Motorized Rifle Regiment)	A-8
Independent Tank Battalion (Motorized Rifle Division)	A-9
Motorized Rifle Regiment	A-10
Tank Regiment	A-11
Motorized Rifle Division	A-12
Tank Division	A-13
Artillery Regiment (Tank Division)	A-14
Artillery Regiment (Motorized Rifle Division)	A-15
Antiaircraft Artillery Regiment (Tank and Motorized Rifle Divisions)	A-16
Multiple Rocket Launcher Battalion (Tank and Motorized Rifle Divisions)	A-17
FROG Battalion (Tank and Motorized Rifle Divisions)	A-18
Antitank Battalion (Motorized Rifle Division)	A-19
Reconnaissance Battalion (Motorized Rifle Division)	A-20
Reconnaissance Battalion (Tank Division)	A-21
Engineer Battalion (Tank and Motorized Rifle Divisions)	A-22
Signal Battalion (Motorized Rifle Division)	A-23
Signal Battalion (Tank Division)	A-24
Chemical Battalion (Motorized Rifle Division)	A-25
Chemical Battalion (Tank Division)	A-26
Divisional Services (Motorized Rifle Division)	A-27
Divisional Services (Tank Division)	A-28

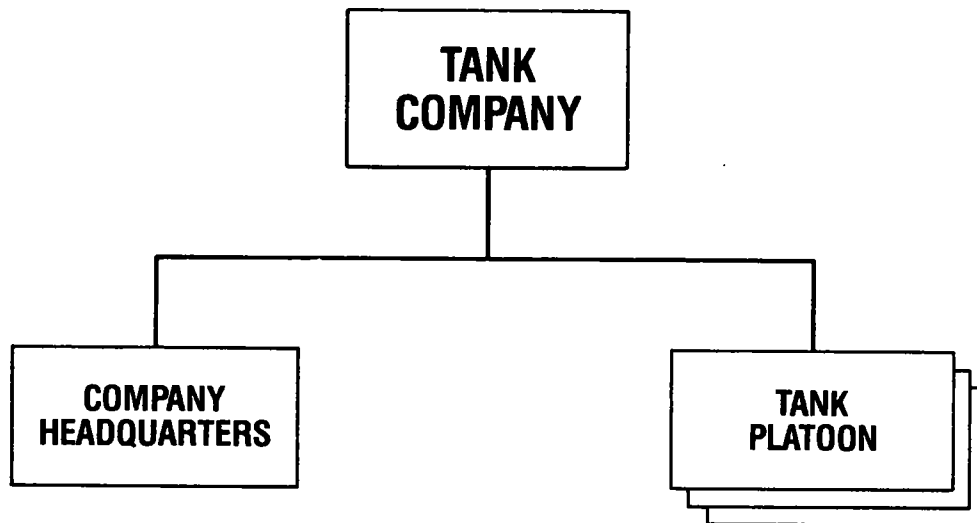
Airborne Division	A-29
Combined Arms Army	A-30
Tank Army	A-31
FRONT	A-32
Tactical Air Army	A-32
Artillery Regiment (Army)	A-33
Heavy Artillery Brigade (FRONT)	A-34
Artillery Division (FRONT)	A-35
Surface-to-Surface Missile (SSM) Brigades (FRONT and Army)	A-36
Surface-to-Air Missile Brigade (GANEF)	A-37
Surface-to-Air Missile Regiment (GAINFUL)	A-37
Engineer Brigade (FRONT and Army)	A-38
Intelligence Battalion (Army)	A-38
Intelligence Regiment (FRONT)	A-38
Signal Intercept Battalion (Army)	A-39
Signal Intercept Regiment (FRONT)	A-40
Motor Transport Brigade/Regiment (FRONT, Tank, and Combined Arms Armies)	A-41
Signal Regiment (Army)	A-41
Signal Brigade (FRONT)	A-41
Radio Electronic Combat Battalion (FRONT and Army)	A-42
Psychological Operations Company (Army)	A-43
Psychological Operations Battalion (FRONT)	A-43
Helicopter Regiment, Tactical Air Army	A-43
Chemical Battalion (Army)	A-44
Chemical Brigade (FRONT)	A-45
Type Air Support	A-46

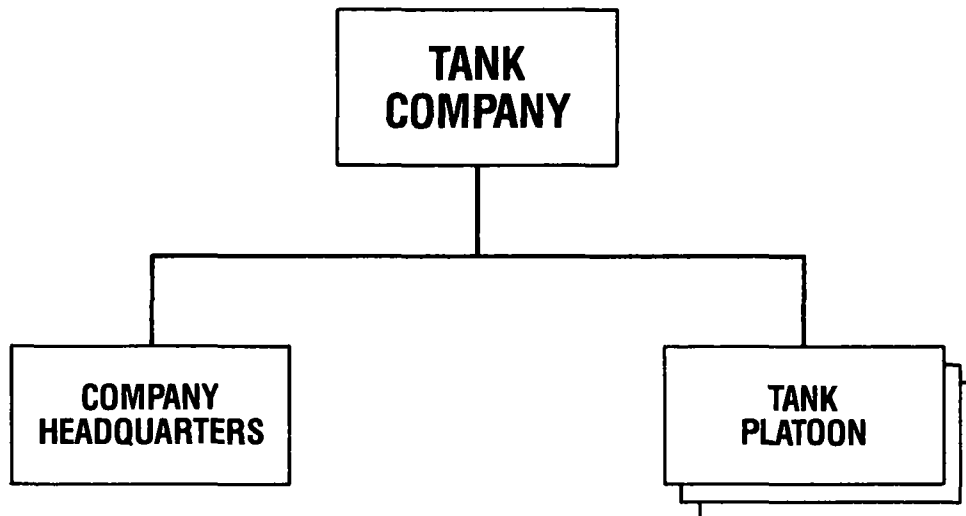
MOTORIZED RIFLE COMPANY

[illegible]

*DEPLOYED FROM BATTALION AS SITUATION DEMANDS.

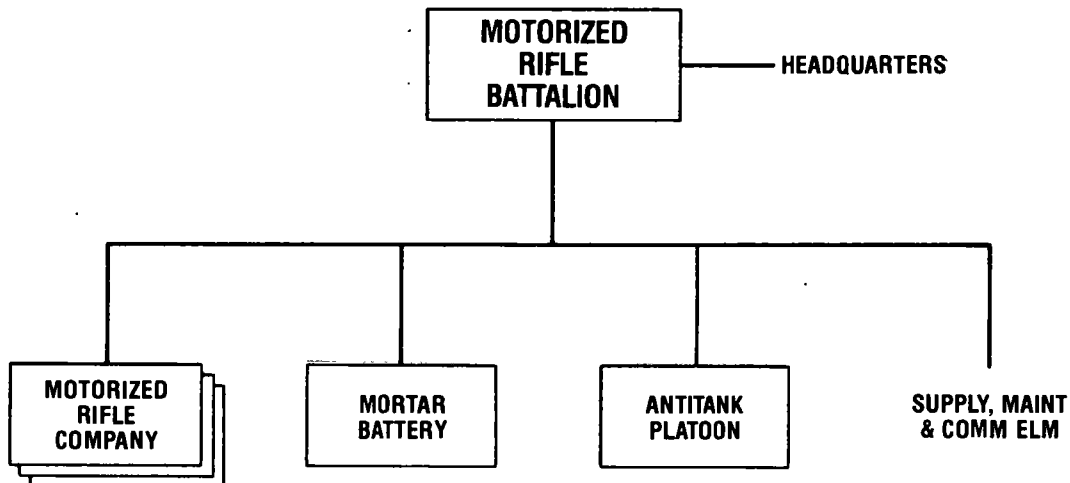
**(Medium Tank Battalion, Tank Regiment
and Independent Tank Battalion)**

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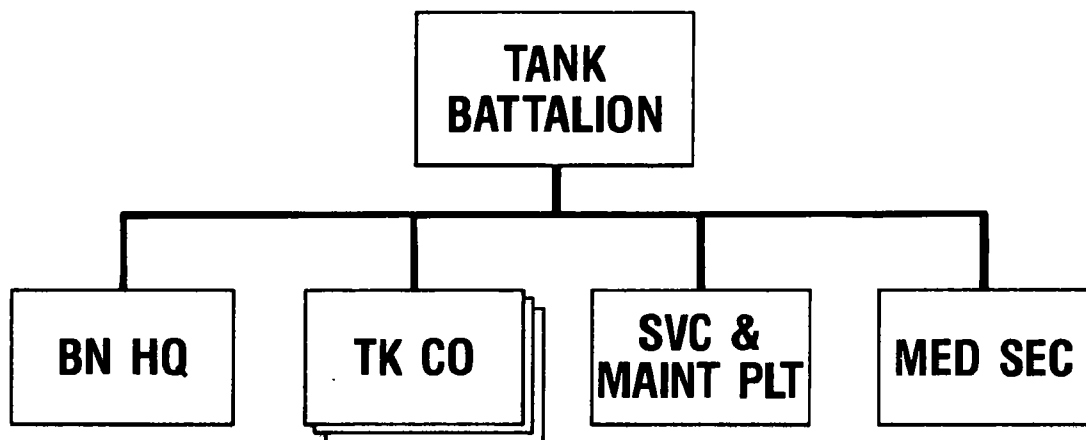
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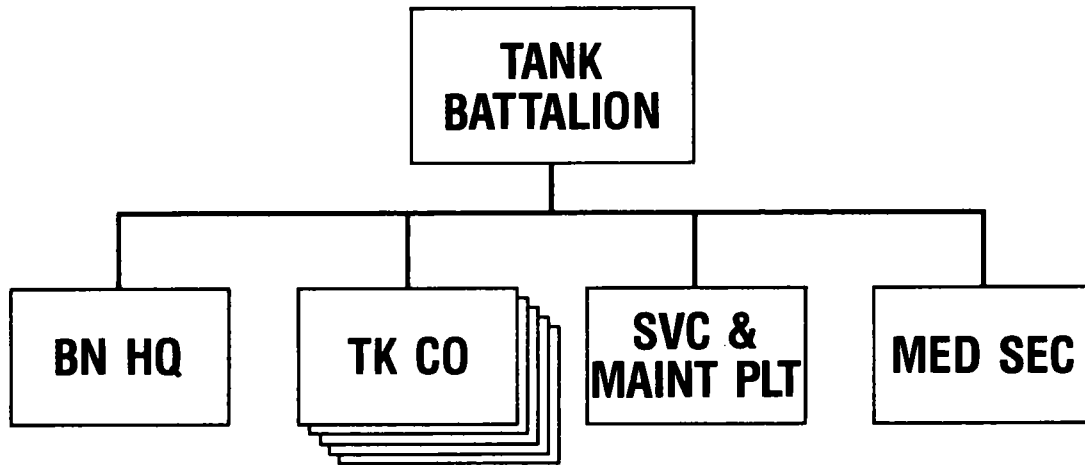
MOTORIZED RIFLE BATTALION

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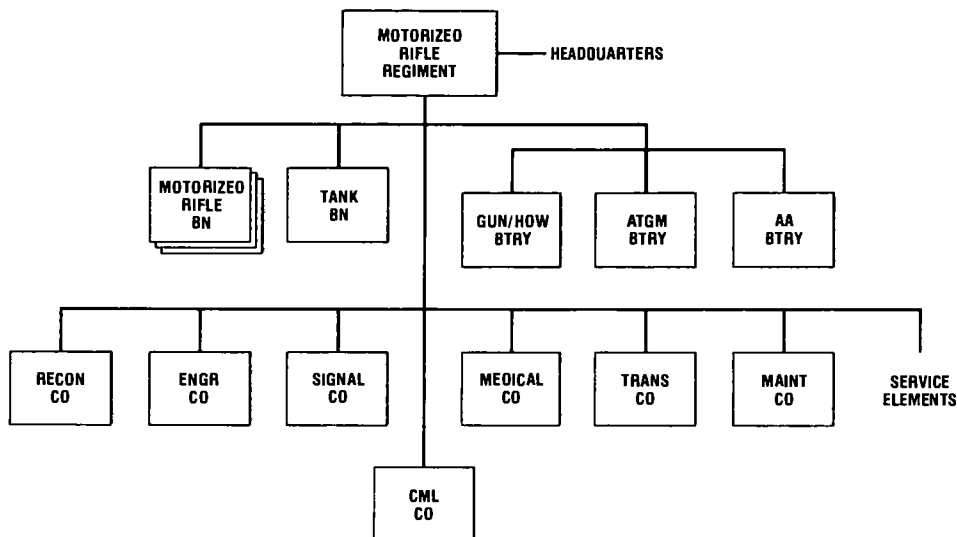
MEDIUM TANK BATTALION

(Motorized Rifle Regiment)

[illegible]

[illegible]

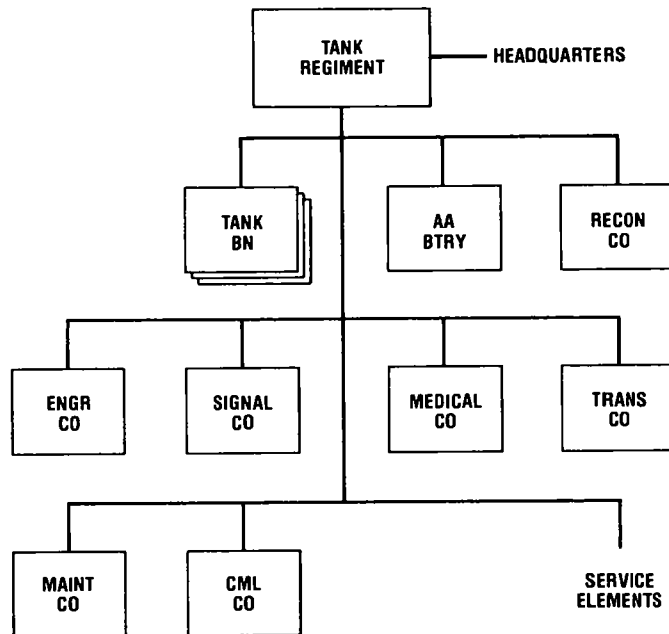
MOTORIZED RIFLE REGIMENT



	PERSONNEL			WEAPONS & EQUIPMENT																		
UNITS	OFFICER	ENLISTED	TOTAL	TK MDM 55, 62, 72	TANK PT-76 AMPHIBIOUS	APC, BTR-60 PA/PJ/PB	APC BMP	APC, BRDM-2	MTRCL	7.62mm LMG PKM	23mm AA GUN ZSU-23-4	ATGM VEHICLE AT-2/3	ATGM MANPACK AT-3	73mm RCL GUN SPG-9	85mm ATGL RPG-7	120mm MORTAR	122mm GUN/HOW*	SA-7 GRAIL	TEL SA-9	RADAR (Gnd Surv) GS-12		
REGT HQ	28	32	60			1	1	4	4													
MTR RIFLE BN (3)	84	1236	1320			3	90	3		171			6	6	81	18		27				
TANK BN	23	185	208	40		1		1										9				
GUN/HOW BTRY	5	64	69														6					
ATGM BTRY	4	16	20									9										
AA BTRY	6	52	58								4								4			
RECON CO	4	43	47		3			9	5											1		
ENGR CO	5	53	58																			
SIGNAL CO	4	53	57			2																
CHEMICAL CO	1	34	35					2														
MEDICAL CO	4	23	27																			
TRANS CO	5	69	74																			
MAINT CO	3	47	50																			
SERVICE ELEMENTS	1	31	32																			
TOTAL	177	1938	2115	40	3	7	91	19	9	171	4	9	6	6	81	18	6	36	4	1		

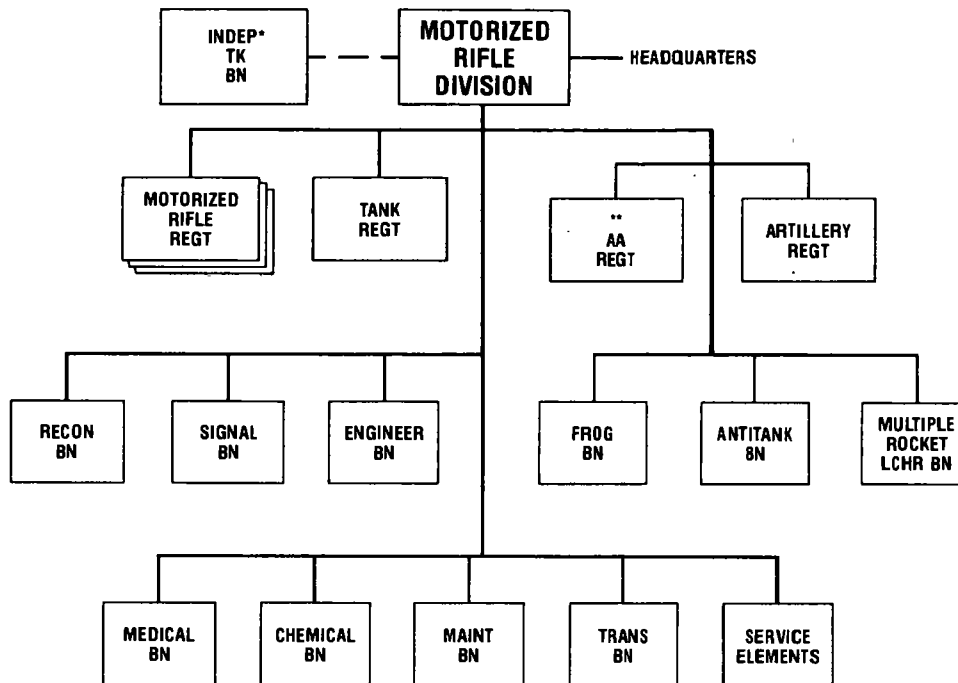
*TOWED OR SELF PROPELLED

TANK REGIMENT



UNITS	PERSONNEL			WEAPONS & EQUIPMENT														
	OFFICER	ENLISTED	TOTAL	TK MDM 55 62 72	TK LT PT-76	7.62MM LMG PKM	23MM AA GUN 25U-23-4	AT GRENADE LCHR RPG-7	SAM SA-7 GRAIL	SAM SA-9 GASGIN	APC BTR BMP, BRPM	MTRCL	RADAR (GND SURV) GS-12					
REGT HQ	28	32	60	2														
TANK BN (3)	72	441	513	93					27		6							
AA BTRY	6	52	58				4			4								
RECON CO	4	43	47		3	3		4			4	3	1					
ENGR CO	5	53	58					4			3							
SIGNAL CO	4	53	57								2	4						
TRANS CO	5	69	74															
MAINT CO	3	52	55															
CML CO	1	34	35															
MEDICAL CO	4	23	27															
SERVICE ELM	1	31	32															
TOTAL	133	883	1016	95	3	3	4	8	27	4	15	7	1					

MOTORIZED RIFLE DIVISION

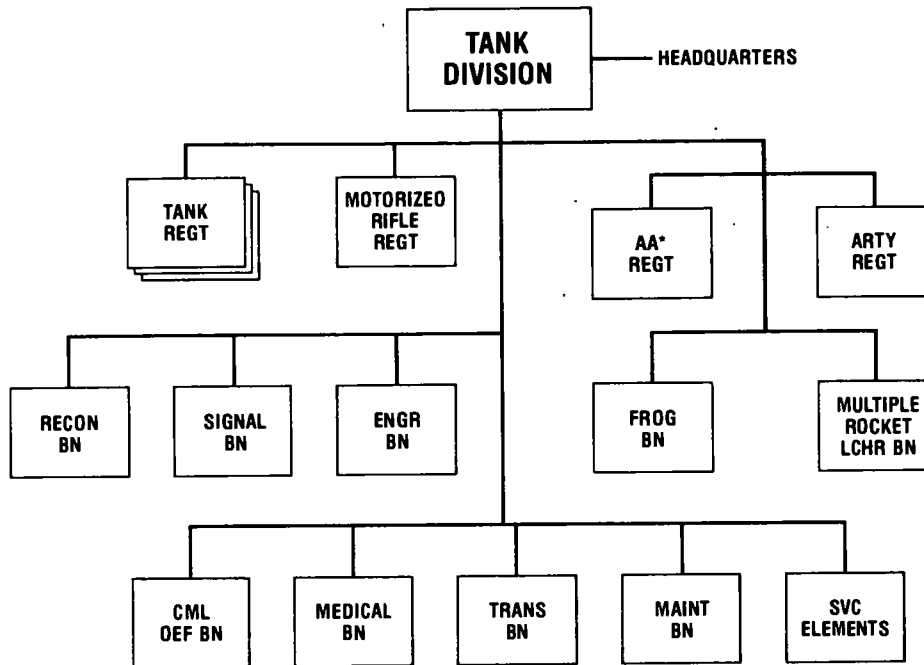


* MAY BE ORGANIC TO SOME BUT NOT ALL MOTORIZED RIFLE DIVISIONS.
 ** MAY BE REPLACED BY SA-8 OR SA-6 UNIT.

	PERSONNEL			WEAPONS & EQUIPMENT																		
UNITS	OFFICER	ENLISTED	TOTAL	TK MDM 55/62/72	TANK PT-76 AMPHIBIOUS	APC BTR, BMP BDM	MTRCL	7.62MM LMG PKM	23MM AA GUN ZSU-23-4	ATGM VEHICLE AT-2/3	ATGM MANPACK AT-3	57MM AA GUN* S-60	73MM RCL GUN SPG-9	85MM AT GL RPG-7	100MM AT GUN T-12	120MM MORTAR	122MM HOW**	152MM HOW**	122MM RL BM-21	TEL FROG-7	SA-7 GRAIL	TEL SA-9
DIV HQ	93	223	316																			
MTR RIFLE REGT (3)	531	5814	6345	120	9	351	27	513	12	27	18		18	243		54	18				108	12
TANK REGT	133	883	1016	95	3	15	7	3	4					8							27	4
ARTY & AA	195	1989	2184			15						24			18		36	18	18	4		
RECON BN	44	256	300		7	19	33							5								
ENGR BN	35	350	385			10																
SIGNAL BN	27	253	280			4	13															
CHEMICAL BN	12	138	150			4																
MEDICAL BN	32	168	200																			
MAINT BN	20	180	200																			
TRANS BN	25	350	375																			
SERVICE ELEMENTS	16	154	170			5	20															
TOTAL	1163	10758	11921	215	19	423	100	516	16	27	18	24	18	256	18	54	54	18	18	4	135	16

* MAY BE REPLACED BY A SA-8 OR SA-6 UNIT.
 ** TOWED OR SELF PROPELLED.

TANK DIVISION



*MAY BE REPLACED BY SA-8 OR SA-6 UNIT.

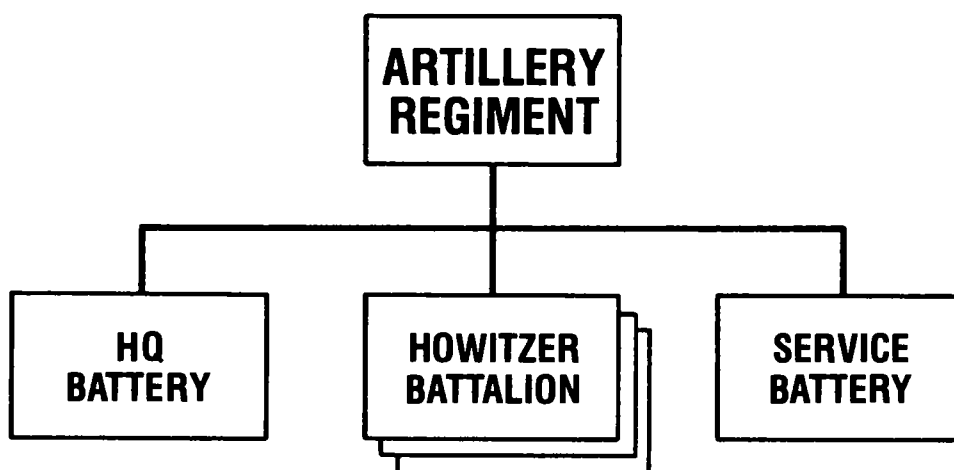
	PERSONNEL			WEAPONS & EQUIPMENT																		
UNITS	OFFICER	ENLISTED	TOTAL	TK MDM 55/62/72	TANK PT-26 AMPHIBIOUS	APC. BTR. BMP. BRDM	MTRCL	7.62MM LMG PKM	23MM AA GUN 25U-23-4	ATGM VEH AT-23	ATGM MAN PACK AT-3	57MM AA GUN* S-60	73 REC GUN SPG-9	85MM AT GL RPG-7	100MM AT GUN T-12	120MM MORTAR	122MM HOW**	152MM HOW**	122MM RLBM-21	TEL FROG-7	SA-7 GRAIL	TEL SA-9
DIV HQ	93	223	316																			
TANK REGT (3)	399	2649	3048	285	9	45	21	9	12					24							81	12
MOTORIZED RIFLE REGT	177	1938	2115	40	3	117	9	171	4	9	6		6	81		18	6				36	4
ARTY & AA	172	1730	1902			12						24					54		18	4		
RECON BN	35	265	300		7	19	33							5								
SIGNAL BN	27	263	290			4	13															
ENGR BN	38	352	390			10																
CML BN	18	142	160			4																
MEDICAL BN	25	175	200																			
TRANS BN	25	350	375																			
MAINT BN	21	212	233																			
SERVICE ELM	5	95	100			5	5															
TOTAL	1035	8394	9429	325	19	216	71	180	16	9	6	24	6	110		18	60		18	4	117	16

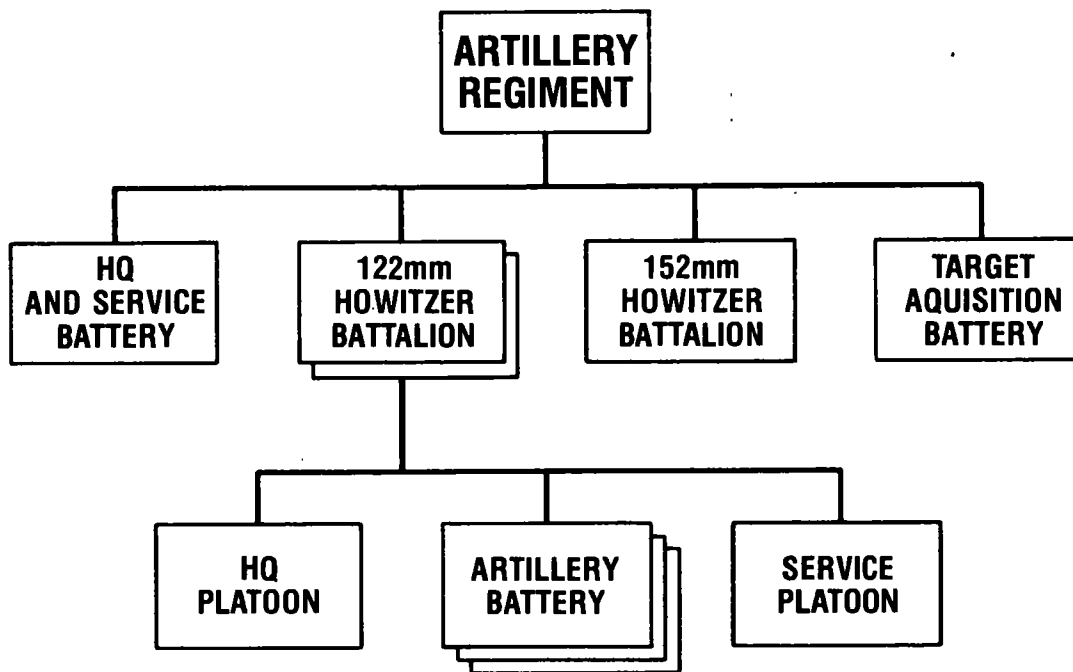
*MAY BE REPLACED BY A SA-8 OR SA-6 UNIT.

**TOWED OR SELF PROPELLED

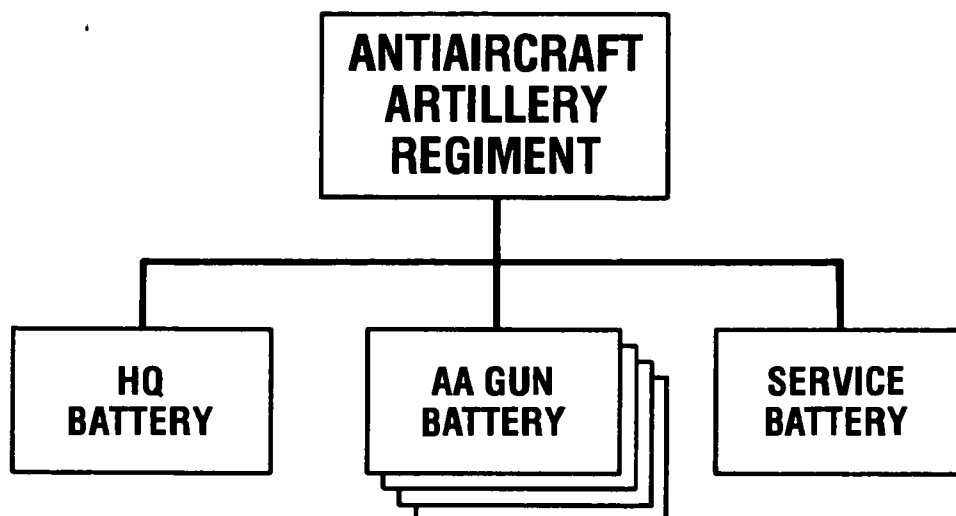
ARTILLERY REGIMENT

(Tank Division)

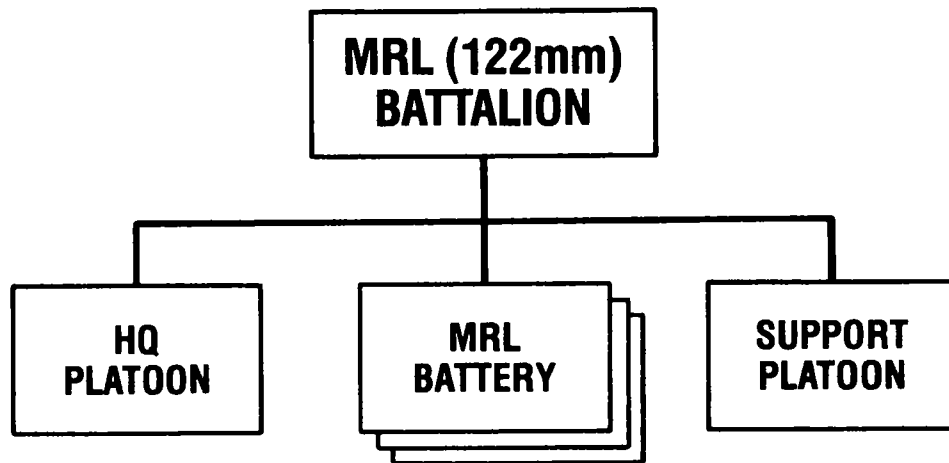
[illegible]

[illegible]

ANTIAIRCRAFT ARTILLERY REGIMENT **(Tank and Motorized Rifle Divisions)**

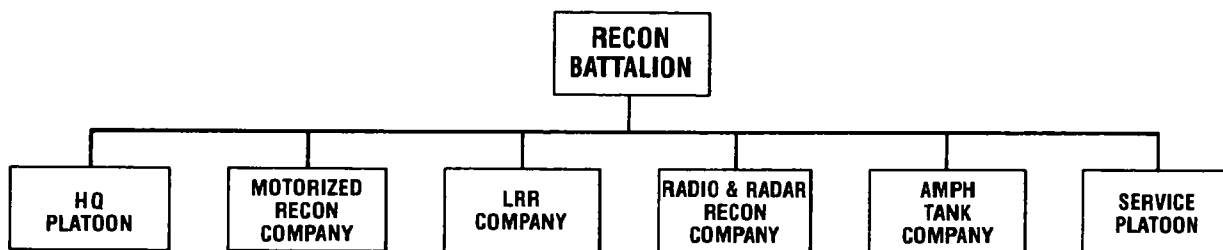


UNITS	PERSONNEL			WEAPONS & EQUIPMENT																
	OFFICER	ENLISTED	TOTAL	57mm AA GUN 5-60	TRK	BABAR(JA) FLAT FACE	BABAR(JC) FLAP WHEEL	APC, BTR, BMP BRDM												
REGT HQ	7	50	57		8	1		2												
AA GUN BTRY (4)	20	264	284	24	48		4													
SERVICE BTRY	5	78	83		28															
TOTAL	32	392	424	24	84	1	4	2												

[illegible]

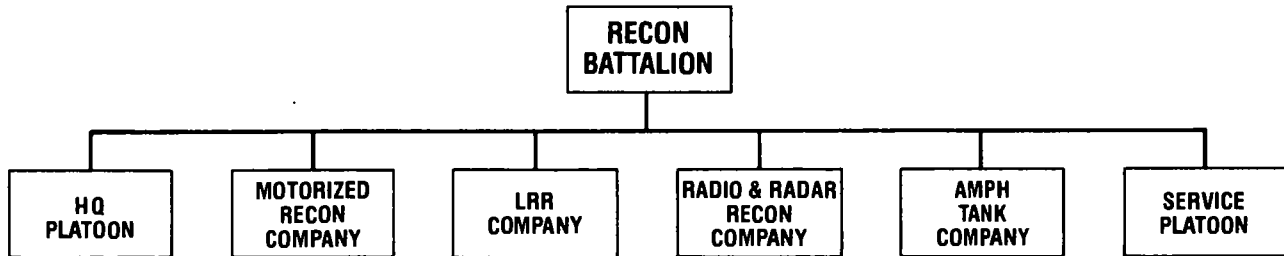
[illegible]

RECONNAISSANCE BATTALION (Motorized Rifle Division)



UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	TK AMPS PI-76	APC BTR BMP BRDM	MTRCL	85MM ATGL RPG-7	7.62 RIFLE AKM	9MM PISTOL PM										
HQ PLT	9	28	37		4	1		28	9										
MTR RECON CO	7	84	91		14	32		84	7										
LRR CO	9	21	30		1		5	21	9										
RAD & RDR RECON CO	7	71	78					71	7										
AMPH TANK PLT	3	18	21	7				18	3										
SERVICE PLT	9	34	43					34	9										
TOTAL	44	256	300	7	19	33	5	256	44										

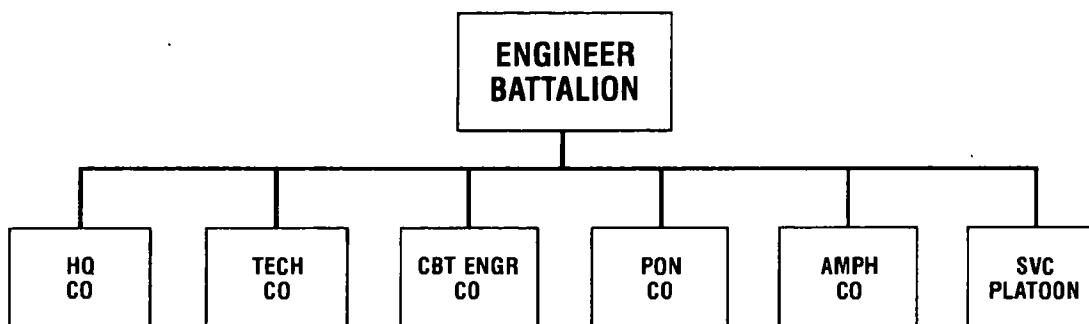
RECONNAISSANCE BATTALION (Tank Division)



UNITS	PERSONNEL			WEAPONS & EQUIPMENT													
	OFFICER	ENLISTED	TOTAL	TK AMPS PT-76	APC, BTR, BMP BRDM	MTRCL	85mm ATGL RPG-7	7.62 RIFLE AKM	9mm PISTOL PM	SA-7 GRAIL							
HQ PLT	7	30	37		4	1		30	7								
MTR RECON CO	6	86	92		14	32		86	6	8							
LRR CO	7	22	29		1		5	22	7								
RDO & RDR RECON CO	6	74	80					74	6								
AMPH TANK PLT	3	18	21	7				18	3								
SERVICE PLT	6	35	41					35	6								
TOTAL	35	265	300	7	19	33	5	265	35	8							

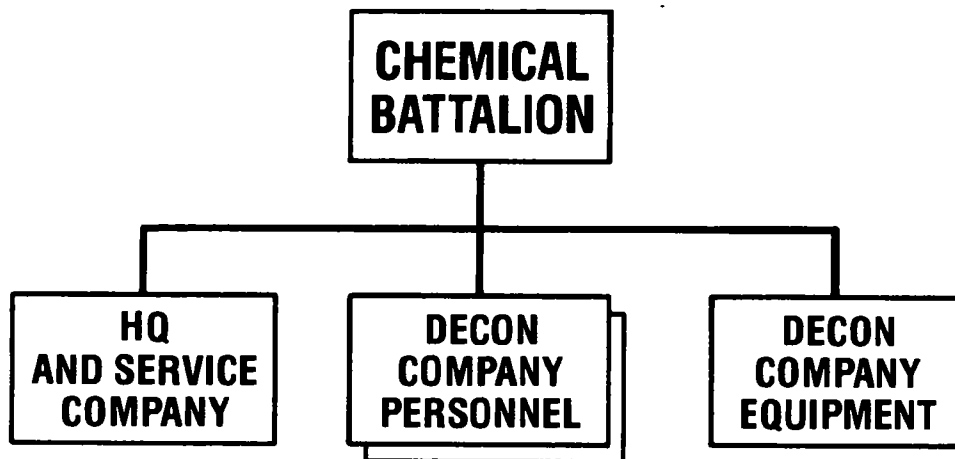
ENGINEER BATTALION

(Tank and Motorized Rifle Divisions)

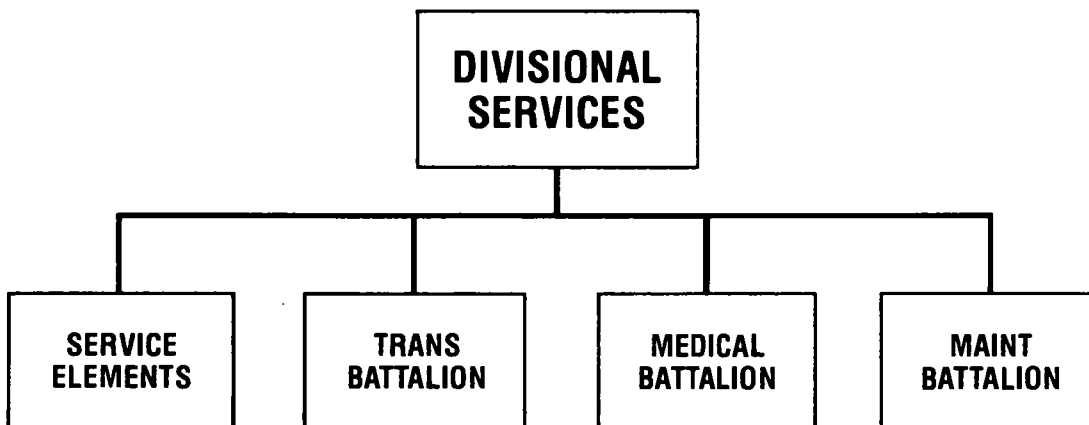


	PERSONNEL			WEAPONS & EQUIPMENT														
UNITS	OFFICER	ENLISTED	TOTAL	APC BTR BMP BROM	ARV, T-54-T, JSU-T	TRK	ARMED TRKD MINE LAYER	TRK MTD BRG SET TMM	TK LCHD BRG SET MTU	PONTON BRG SET PMP	TRKS AMPHN TRANS PTS-M	AMPH FERRY SET GSP	MOTORIZED GRADER D-598	DOZER BAT, BATM	DITCHING MACH MDK-2			
HQ CO	11	63	74	4		10												
TECH CO	7	89	96	1		14		1	3				3	3	4			
CBT ENGR CO	6	62	68	4		7	3											
PON CO	5	64	69			7				1								
AMPH CO (MRD)	4	47	51	1							12	3						
AMPH CO (TD)	7	49	56	1							12	6						
SVC PLT	2	25	27		3	15												
TOTAL MRD	35	350	385	10	3	53	3	1	3	1	12	3	3	3	4			
TOTAL TD	38	352	390	10	3	53	3	1	3	1	12	6	3	3	4			



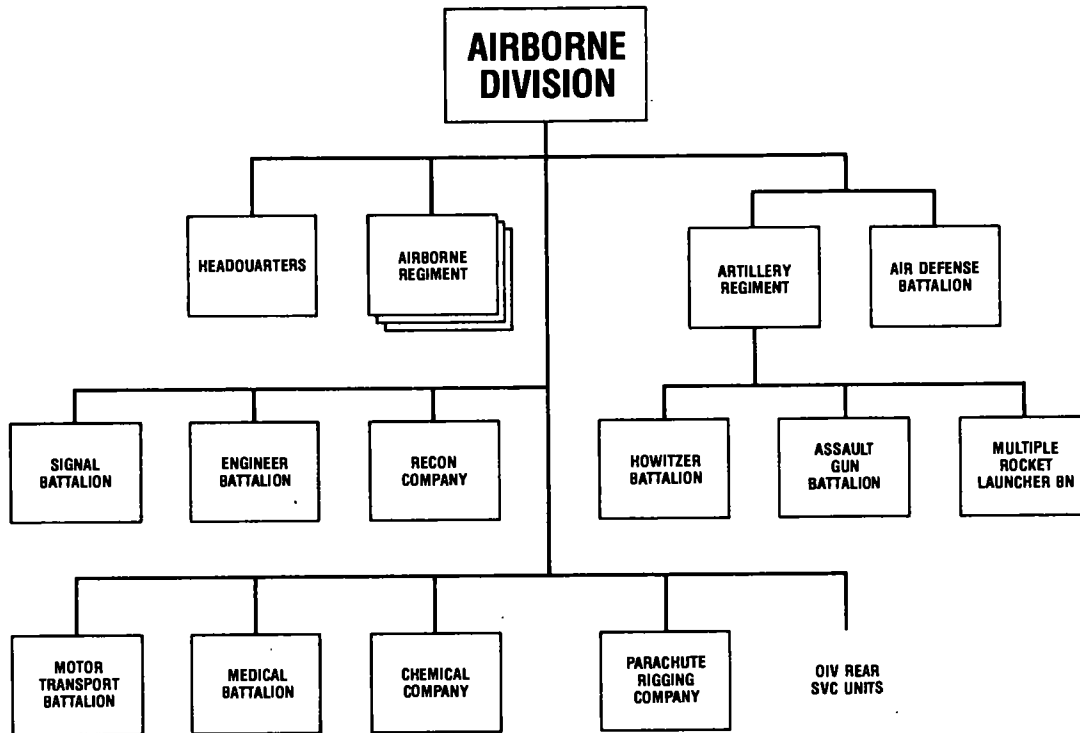
[illegible]

DIVISIONAL SERVICES (Tank Division)



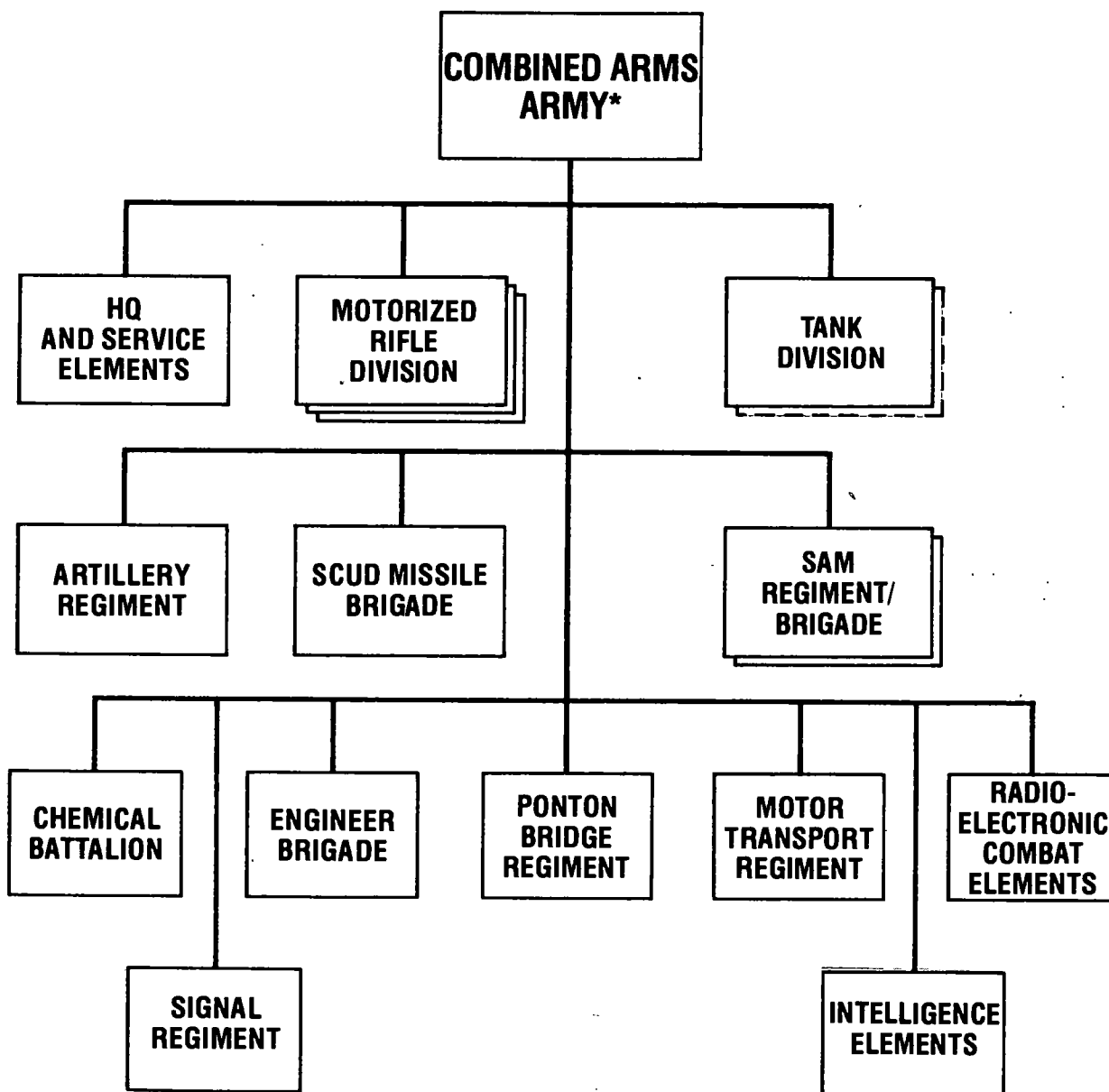
UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	APC, BTR, BMP BRDM	ARV T-54-T, JSU-T	TRK	MTRCL												
SERVICE ELM	5	95	100	5		10	5												
TRANS BATTALION	25	350	375			202													
MED BN	25	175	200			31													
MAINT BN	21	212	233		5	64													
TOTAL	76	832	908	5	5	307	5												

AIRBORNE DIVISION



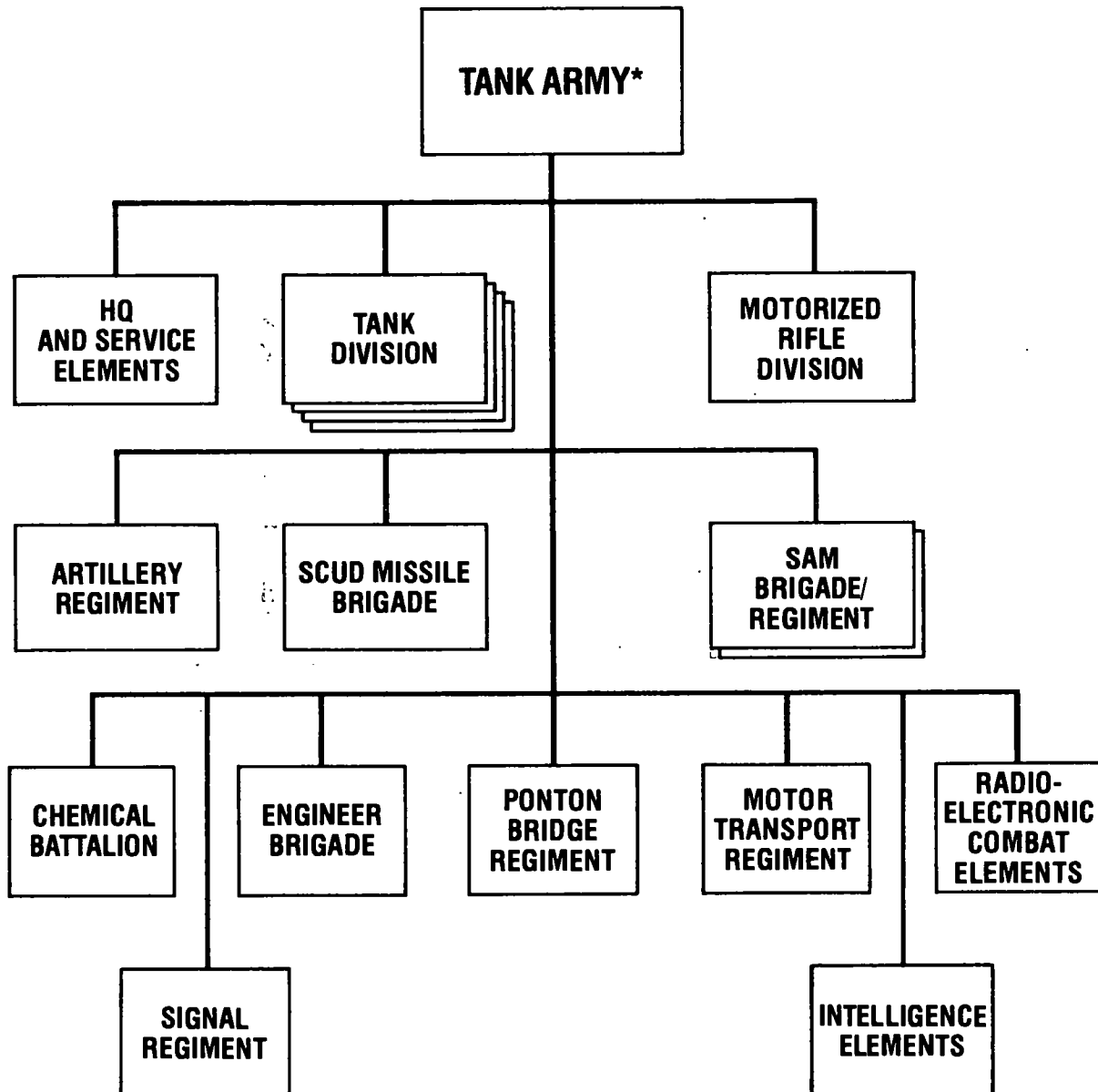
	PERSONNEL			WEAPONS & EQUIPMENT																	
UNITS	OFFICER	ENLISTED	TOTAL	7.62mm LMG RPK/PPK	23mm AA GUN ZU-23	57mm AT GUN (SP) ASU-57	85mm AT GUN (SP) ASU-85	ATGM VEH AT-2/3	ATGM MAN- PACK AT-3	73mm REL GUN SPG-9	85mm ATGL RPG-7	82mm MORT M1937	122mm HOW D-30	140mm RL RPJ- 14/WP-8	AFV BMD	AFV BDRM-2	ARVT-54-T/	TRK	MTRCL	RADAR (Grnd Surv) GS-12	SA-7 GRAIL
HQ AND SVC ELM	101	527	628												2		2	230	5		
ABN REGT (3x)	555	5433	5988	243	18	27		27	27	81	270	54	18		321	63	18	495	27	1	105
DIV ARTY ELM	114	672	786		18		18						18	18	7	4	1	147			6
RECON CO	6	50	56								9				3	9		1	5		4
ENGR BN	28	270	298												13	6	1	28			2
SIG BN	21	178	199															40	3		
CML CO	5	48	53													5		17			2
TOTAL	830	7178	8008	243	36	27	18	27	27	81	279	54	36	18	346	87	22	958	40	1	119

COMBINED ARMS ARMY



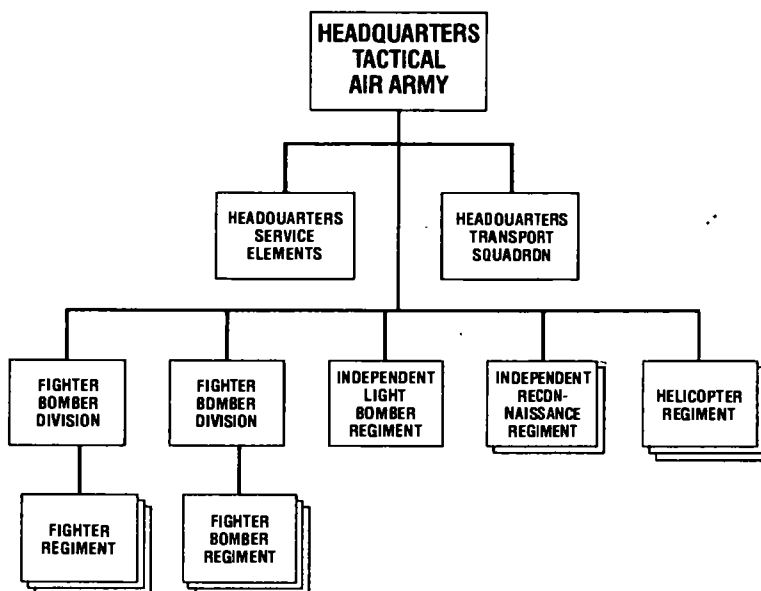
*IT SHOULD BE NOTED THAT THERE IS NO FIXED ORGANIZATIONAL STRUCTURE ABOVE DIVISION LEVEL. NO TWO ARMIES ARE EXACTLY ALIKE.

TANK ARMY

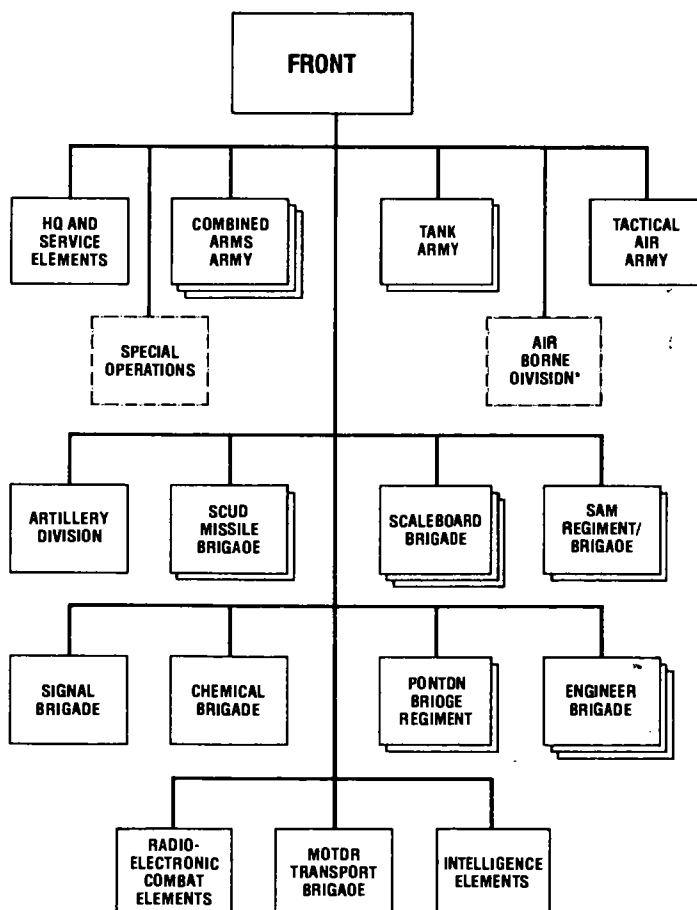


*THE ACTUAL STRUCTURE OF THE TANK ARMY DEPENDS UPON THE MISSION AND AREA OF OPERATIONS.

TACTICAL AIR ARMY



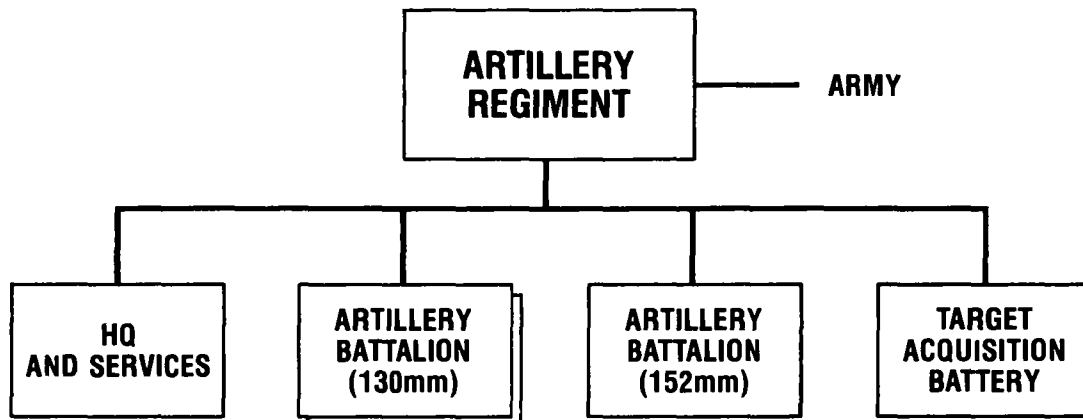
FRONT



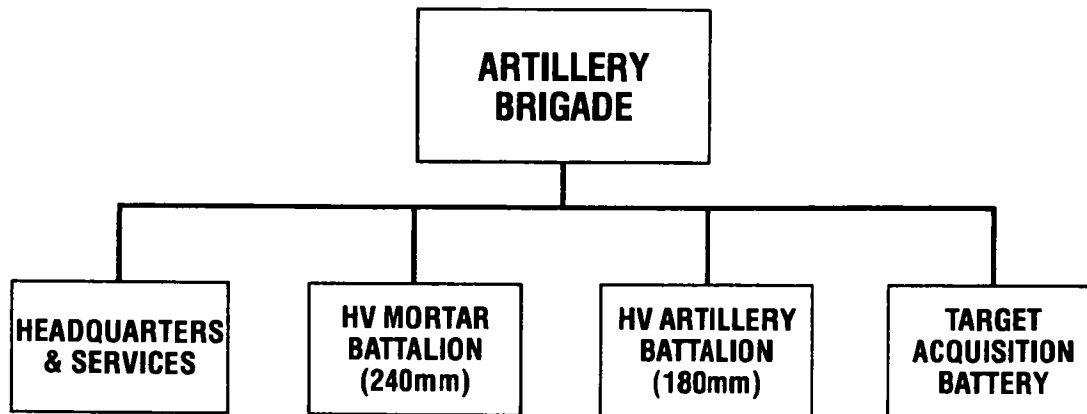
*MAY BE INCLUDED IN A FRONT.

ARTILLERY REGIMENT

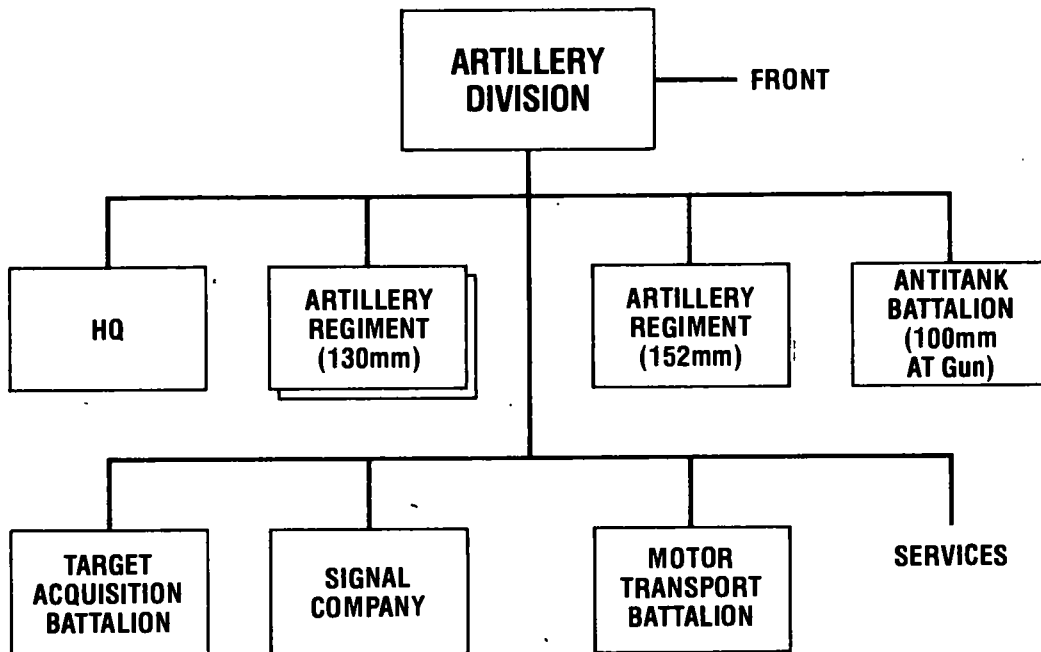
(Army)

[illegible]

HEAVY ARTILLERY BRIGADE (FRONT)

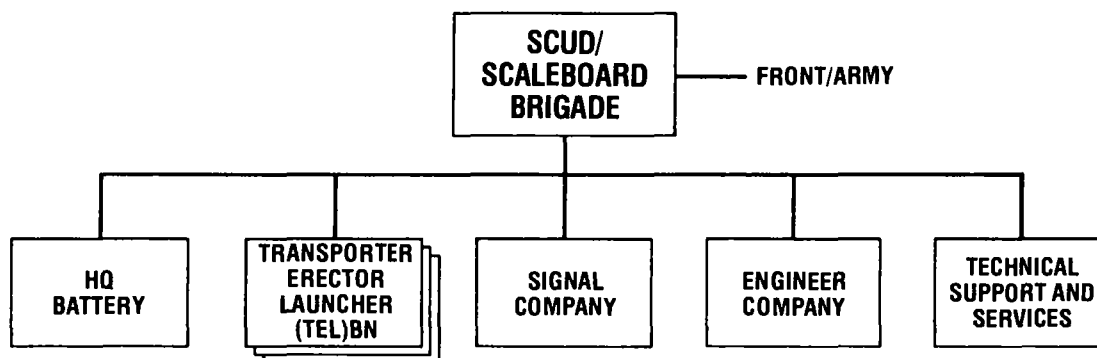
[illegible]

ARTILLERY DIVISION (FRONT)

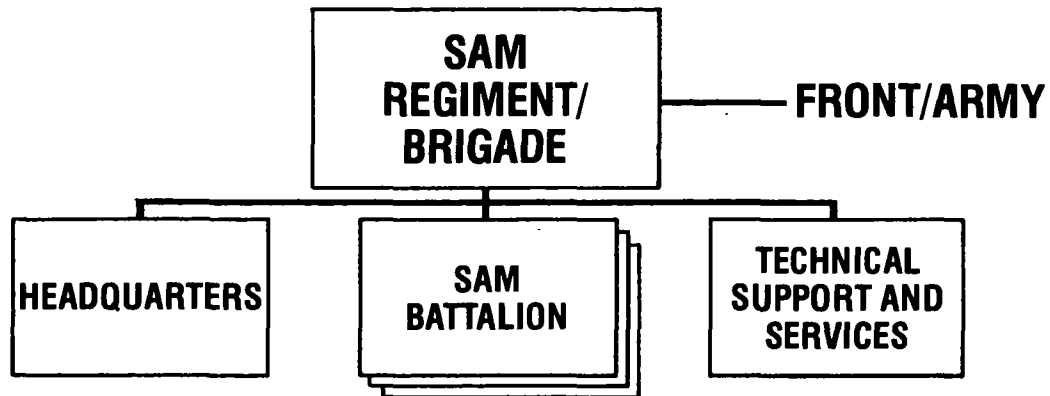


	PERSONNEL			WEAPONS & EQUIPMENT														
UNITS	OFFICER	ENLISTED	TOTAL	130mm GUN M-46	152mm GUN/ HOW D20	100mm AT GUN T-12	APC BTR BMP BRDM	ARTILLERY TRACTOR AT-P	ARTILLERY TRACT AT-S-59	TRUCKS	RADAR (CB)	RADAR (MET) END TRAY	RADAR (Gnd Surv) GS-13	SOUND RANG- ING SET	LASER RANG- ING SET			
DIV HQ	16	43	59				2			65								
130mm ARTY																		
REGT (2)	166	1600	1766	108					108	100								
152mm ARTY																		
REGT	83	800	883		54					125								
ANTITANK BN	23	259	282			18		18		50								
TGT ACQ BN	40	300	340							24	3	6	3	6	9			
MOTOR TRANS BN	25	350	375							202								
SIGNAL CO	5	57	62							15								
SERVICES	30	250	280							74								
TOTAL	388	3659	4047	108	54	18	2	18	108	655	3	6	3	6	9			

SURFACE-TO-SURFACE MISSILE (SSM) BRIGADES (FRONT and Army)

[illegible]

SAM BRIGADE (GANEF)/SAM REGIMENT (GAINFUL)



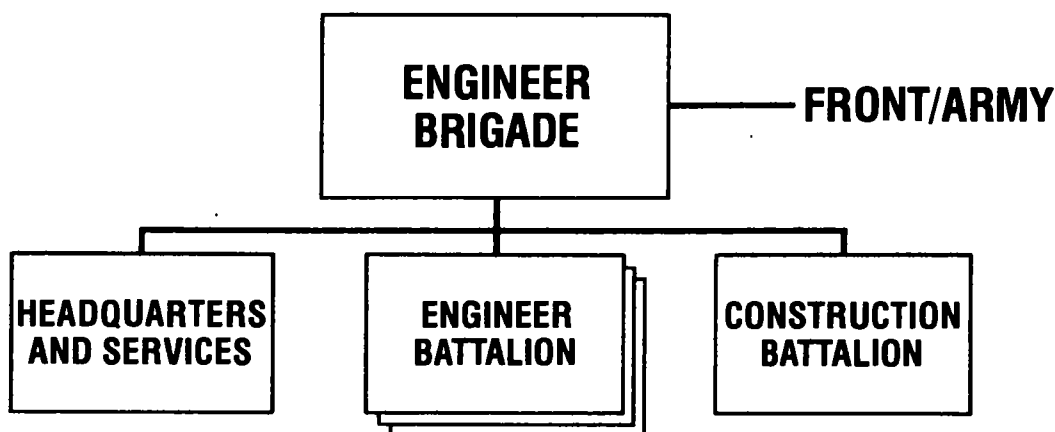
SURFACE-TO-AIR MISSILE BRIGADE (GANEF)

UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	TEL SA-4 GANEF	RADAR (TA) LONG TRACK	RADAR (FC) PAT HAND	RADAR (HF) THIN SKIN	TRK											
BRIGADE HQ	8	51	59					8											
SAM BN (GANEF) (3)	105	720	825	24	3	9		30											
TECH SPT & SVCS	10	124	134		1		1	12											
TOTAL	123	895	1018	24	4	9	1	50											

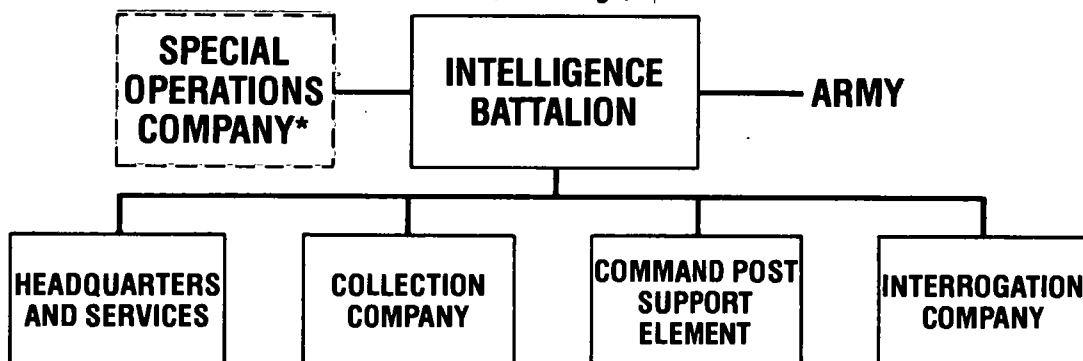
SURFACE-TO-AIR MISSILE REGIMENT (GAINFUL)

UNITS	PERSONNEL			WEAPONS & EQUIPMENT															
	OFFICER	ENLISTED	TOTAL	TEL SA-6 GAINFUL	RADAR (TA) LONG TRACK	RADAR (FC) STRAIGHT FLUSH	RADAR (HF) THIN SKIN	TRKS											
REGIMENT HQ	8	60	68					8											
SAM BN (GAINFUL) (3)	66	420	486	18		6		25											
TECH SPT & SVCS	10	115	125		3		1	12											
TOTAL	84	595	679	18	3	6	1	45											

ENGINEER BRIGADE (FRONT and Army)

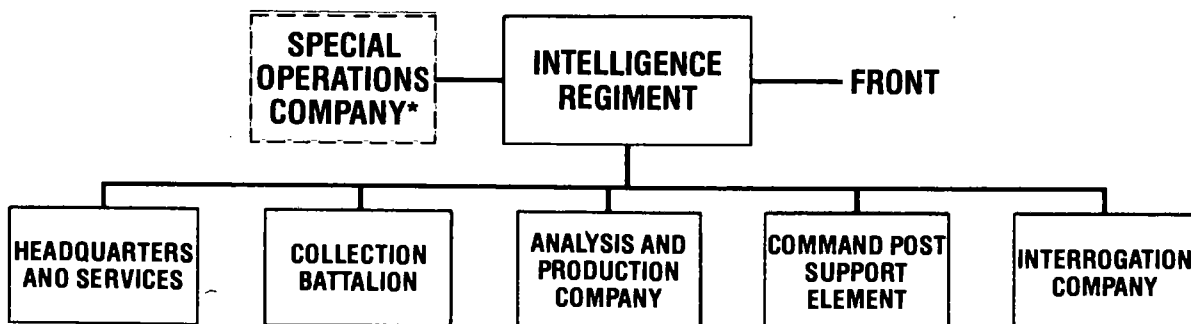


INTELLIGENCE BATTALION (Army)



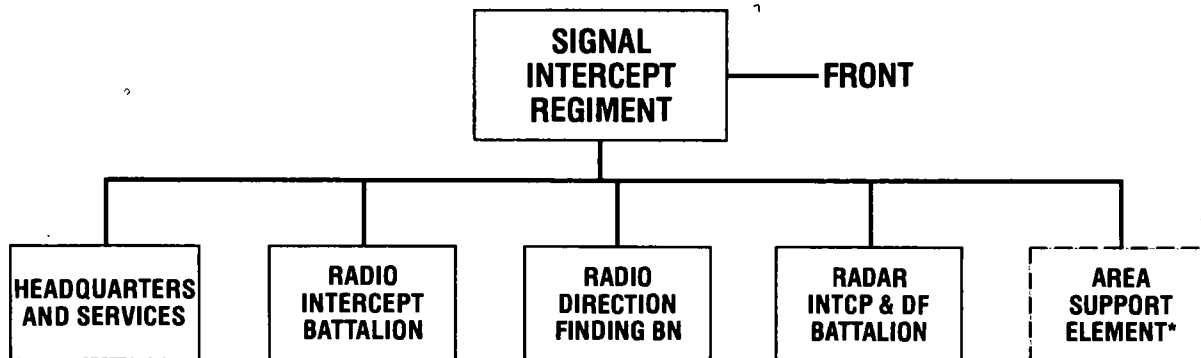
*It is assumed that this unit, if constituted, would probably conduct long-range reconnaissance and intelligence collection missions deep behind opposing forces lines.

INTELLIGENCE REGIMENT (FRONT)



*It is assumed that this unit, if constituted, would probably conduct long-range reconnaissance and intelligence collection missions deep behind opposing forces lines.

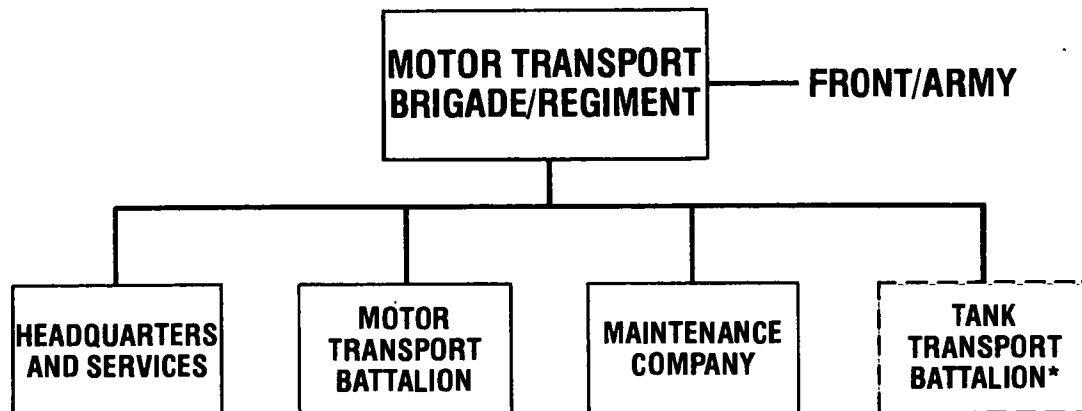
SIGNAL INTERCEPT REGIMENT (FRONT)



*Area support elements are formed as mission-type organizations in which the totals of personnel and types of equipment vary with the tactical mission.

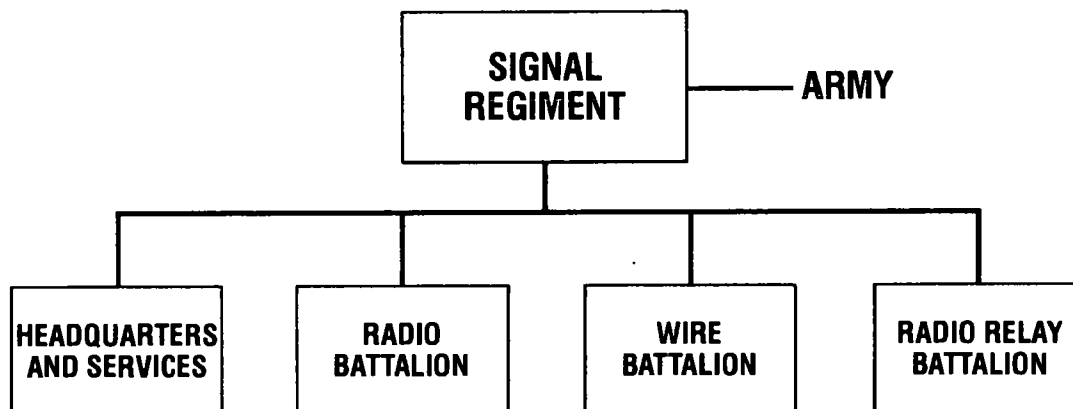
[illegible]

MOTOR TRANSPORT BRIGADE/REGIMENT (FRONT, Tank, and Combined Arms Armies)

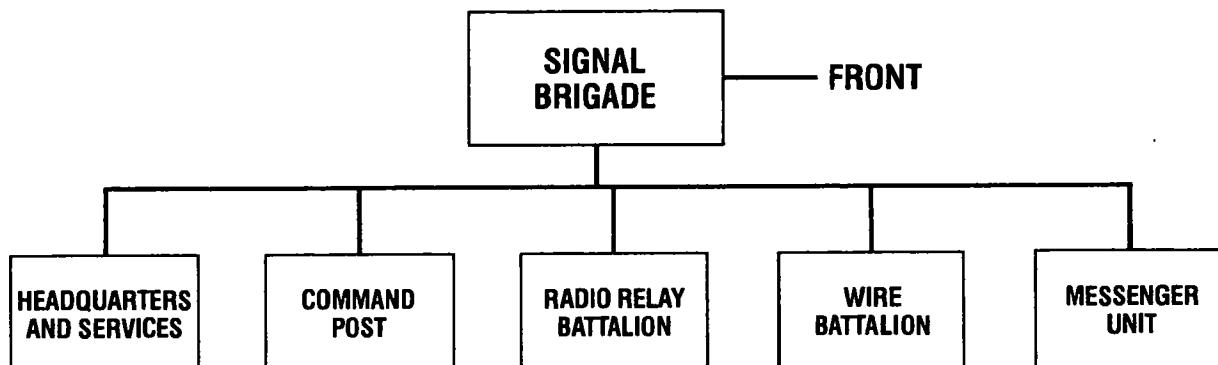


*A Tank Transport Vehicle Battalion may be attached to the Brigade/Regiment when the mission dictates.

SIGNAL REGIMENT (Army)

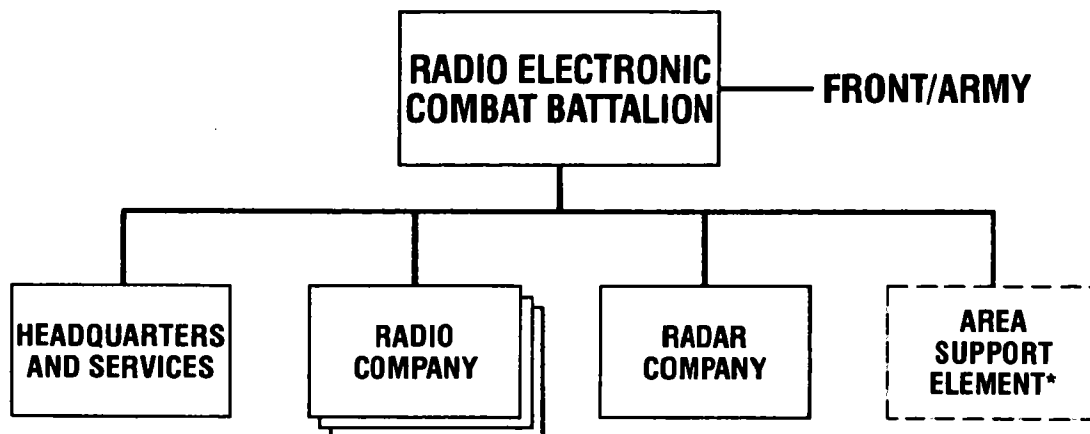


SIGNAL BRIGADE (FRONT)



RADIO ELECTRONIC COMBAT BATTALION

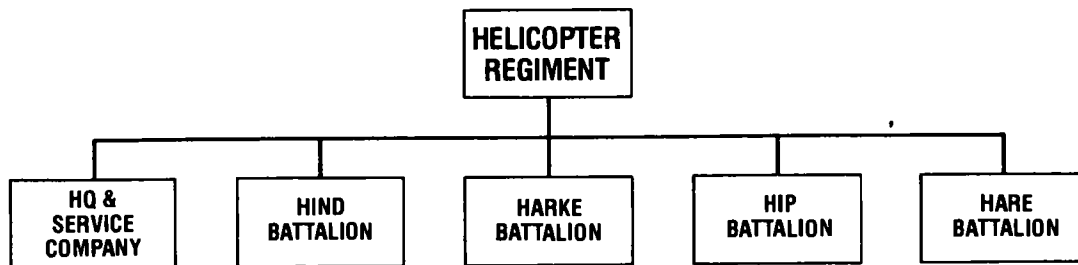
(FRONT and Army)



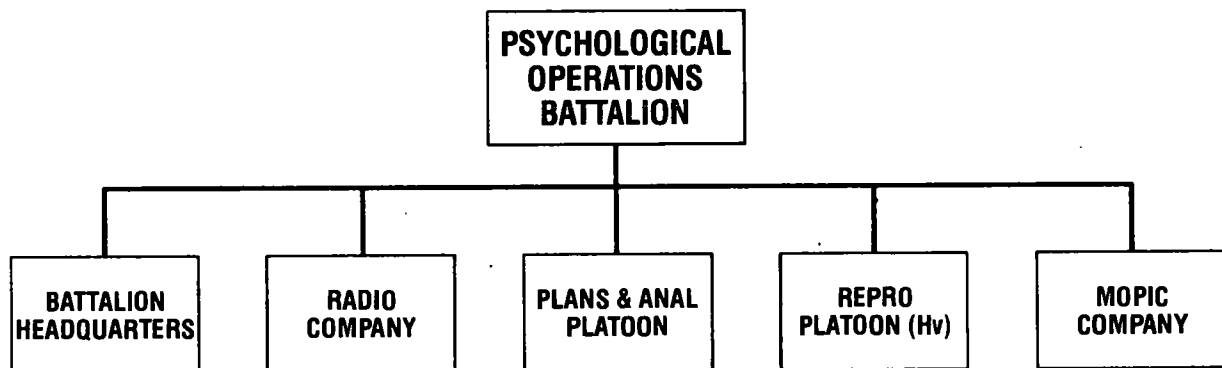
*Area Support Elements are formed as mission-type organizations in which the totals of personnel and types of equipment vary with the tactical mission.

[illegible]

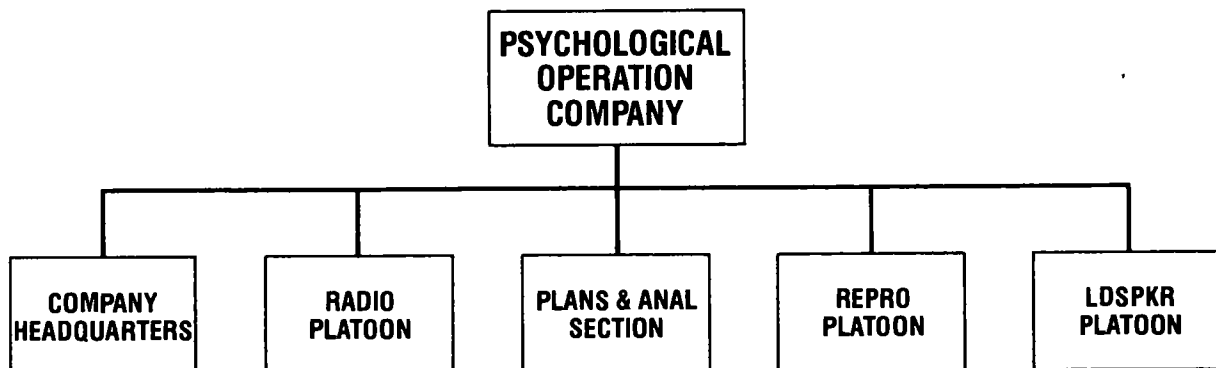
HELICOPTER REGIMENT (Tactical Air Army)



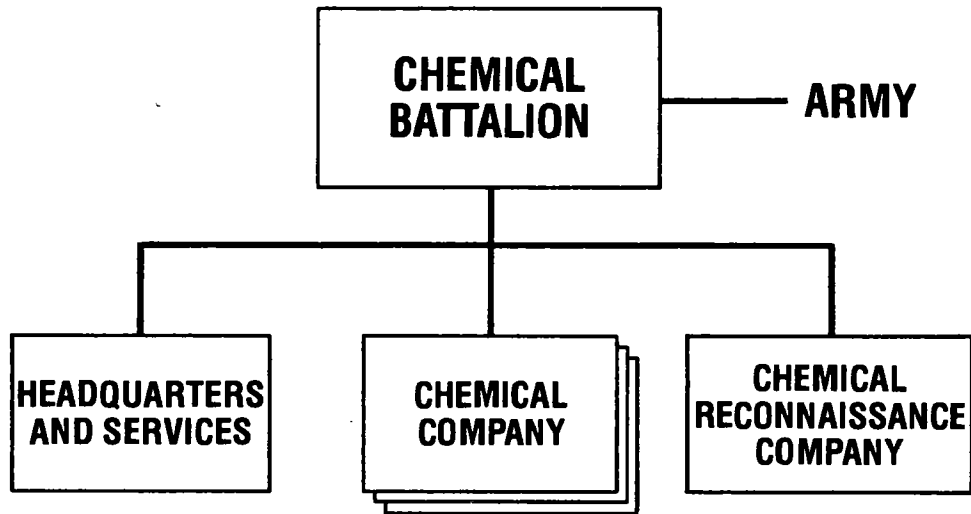
PSYCHOLOGICAL OPERATIONS BATTALION (Front)



PSYCHOLOGICAL OPERATIONS COMPANY (Army)



CHEMICAL BATTALION (Army)



UNITS	PERSONNEL			WEAPONS & EQUIPMENT																
	OFFICER	ENLISTED	TOTAL	APC BTR BMP	BRDM RKH	ARS-14	DDA-53	TMS-65	TRK											
HQ AND SVCS	3	30	33	2					7											
CHEMICAL CO (3)	33	384	417			16	6	3	30											
CHEMICAL RECON CO	8	60	68		15				5											
TOTAL	44	474	518	2	15	16	6	3	42											

TYPE AIR SUPPORT

UNIT	HARE	HIP	COKE	FISHBED/ FOXBAT	ROLE
Tgt Acq Btry	4 (f)				a—Command & Control
Mtr Rfl and Tk Div Hq	1 (b)	1 (a)			b—Liaison
Sig Intcp Bn		8 (d)	2 (d)		c—Reconnaissance (SLAR)
EW Bn		2 (e)	2 (e)		d—ELINT/SIGINT
Ad Elm (FRONT / Army Level)			2 (d & g)		e—Electronic Warfare
Army level Hq	3 (b)	2 (a)		2 (c)	f—Observation/Fire control
Sig Intcp Regt		5 (d)	8 (d)		g—Early warning
FRONT Hq	4 (b)	2 (a)			

NOTE: Close air support, ground controlled intercept, and imagery requirements vary to such a degree with the given situation that a complete assessment cannot be made.

Appendix B

ORDER OF BATTLE HOLDINGS

TABLE OF CONTENTS

Section 1

Northern Front	B-1
10 Combined Arms Army	B-2
10 Combined Arms Army	B-13
7 Guards Tank Army	B-20
11 Guards Tank Army	B-25
46 Guards Tank Army	B-31
51 Guards Tank Army	B-35
11 Air Army	B-40
7 Airborne Rifle Division	B-40
37 Artillery Division ..	B-40

Section 2

Central Front	B-41
2 Combined Arms Army	B-42
14 Combined Arms Army	B-47
23 Combined Arms Army	B-51
20 Tank Army	B-57
15 Air Army	B-61
14 Airborne Rifle Division	B-62
10 Artillery Division ..	B-62

Section 3

Southern Front	B-63
4 Combined Arms Army	B-63
12 Combined Arms Army	B-70
24 Combined Arms Army	B-75
8 Guards Tank Army	B-81
17 Air Army	B-85
4 Airborne Rifle Division	B-85
16 Artillery Division ..	B-85

Section 4

Homeland Forces	B-86
Armies	B-86
Independent Divisions	B-86
Independent Brigades	B-87
Independent Regiments	B-88
Unlocated Units	B-89

B-1. General.

Four major groupings of operational holdings are identified and expanded within this appendix. These holdings have been termed as the Northern, Central, and Southern FRONTS, and Homeland forces. the composition or structure of each FRONT or army may be tailored with attachments from adjacent armies, FRONT or Homeland forces for a given mission. The unlocated units found in section 4 are provided as an additional source of units to the user.

LEGEND:

	FRONT
	COMBINED ARMS ARMY TANK ARMY
	DIVISION
	BRIGADES REGIMENTS ARTILLERY/AIR DEFENSE ELEMENTS
	BATTALIONS

Section 1

B-2. Northern FRONT

Code Name—KARTOSHKA

Code Number—CLU435

Unit	Commander	Code No.
CG	A/GEN ZHELNIN, R.	
FDC	A/GEN AKSAKOV, S.	
CofS	C/GEN SVIRID, A.	
H&S Elm		SMF477
10 CAA	A/GEN CHETVERTKOV, B.	PTB624
18 CAA	A/GEN UMANSKIY, D.	
7 GTA	A/GEN ZELKIN, W.	DKM731
11 GTA	A/GEN MYACHIN, E.	MPS842
46 GTA	A/GEN PETROV, M.	
51 GTA	A/GEN PETOV, M.	WAX001

Unit	Commander	Code No.
11 TAC Air Army	A/A/GEN KHUTIRNEKO, A.	TEA674
7 Abn Rfl Div	LTG YESIPOV, O.	
37 Arty Div	LTG SENIN, M.	GWF099
17 SCUD SSM Bde	MG SUROVTSEV, E.	EOL428
27 SCALEBOARD SSM Bde	MG KIYEV, C.	
2 SAM Regt (GAINFUL)		
8 Engr Bde	COL PATRIN, P.	HQN821
12 Engr Bn		
31 Engr Bn		
11 Cml Bde	COL BRESLAVETS, B.	
U/I Sig Intcp Regt		FMP921
7 Rdo Intcp Bn	LTC AKSENENKO, F.	
9 Rdr Intcp Bn		NRL780
U/I Intel Regt	COL IVANIN, C.	
11 MT Bde	COL DEMIDOV, C.	
90 Med Bde		SHU187
19 REC Bn	LTC MAKHOIN, P.	
10 Psyop Bn		YFZ161
C of R	MG SRETENSKI, B.	RSC671

Unit History. Activated in _____ to direct operations in Northern Europe. Tank heavy forces were assigned in _____. It has no resupply problems and can count on further reinforcements. Deployment to its present positions commenced _____.

B-3. 10 Combined Arms Army.

Code Name—MOKRYE GUBY

Code Number—PTB624

Unit	Commander	Code No.
CG	A/GEN CHETVERTKOV, B.	
FDC	C/GEN GABOV, Z	
CofS	LTG AZARAROV, C.	
H&S Elm		BYD478
128 MRD	LTG RUDACHENKO, K.	KNH114
130 GMRD	LTG KHARIN, D.	UBQ631
134 MRD	LTG GOLOVCHENKO, R.	ZIV792
80 TKD		AVE821

Unit	Commander	Code No.
146 Pon Regt	COL YAKIN, E.	
51 Arty Regt		OZI087
36 SCUD SSM Bde	MG BOYECHO, M.	CGK461
U/I Engr Bde		VUW845
U/I MT Regt		RLK527
61 Intel Bn	LTC YALFEROV, H.	TBC914
U/I Sig Intcp Bn		KMT917
U/I Cml Bn		PSY853
37 Sig Regt		HAA305
91 Psyop Co	CPT POROKHIN	
C of R		AXM716

Unit History. Reactivated and assigned to the NORTHERN FRONT in _____. Brought up to full strength in _____ with the assignment of the 130th Guards Motorized Rifle Division. Subordinate units have participated in extensive unit and individual training programs and now are assumed to be combat ready.

a. 128 Motorized Rifle Division, 10 CAA.

Code Name—

Code Number—KNH114

Unit	Commander	Code No.
CG	LTG RUDACHENKO, K.	
FDC	MG VOLKOV, P.C.	
CofS	MG PASSOV, K.P.	
HQ Elm		EAN498
40 MRR	COL BOLOGOV, R.B.	WFO126
46 MRR	COL ZHELNIN, E.	
51 MRR	COL OKHRIMENKO, B.	LOU191
152 MTR	COL SVIRIDENKO, C.	CTZ328
U/I Mdn Tk Bn	LTC KLIMKOVICH, P.	
U/I Recon Bn		QND587
U/I Engr Bn	LTC BELOV, M.	
U/I Sig Bn		XGE711
52 Cml Bn	LTC ZHDANOV, V.	
2 MT Bn		HUP897

Unit	Commander	Code No.
U/I Maint Bn	LTC BOTIN, P.	FZV829
CofR	COL GREBENNIKOV, V.	MPG929

Unit History. Reactivated and assigned to the NORTHERN FRONT as part of 10th Combined Arms Army in _____. Brought up to full strength with the assignment of filler personnel in _____. Subordinate units were hampered with initial shortages of communications equipment in some unit training programs. All units are now assumed to be fully equipped and combat ready.

(1) 40 Motorized Rifle Regiment, 128 MRD, 10 CAA.

Code Name—RAKOVINA

Code Number—WFO126

Unit	Commander	Code No.
CO	COL. BOLOGOV, R. B.	
DC	LTC YUMASHEV, C.	
CofS	LTC STERNIN, A.	
HQ Elm		SCI020
Recon Co	SrLT KLEYMENOV, V.	YDS378
Engr Co	CPT ALDANOV, B.	
1 Mtr Rfl Bn		NHQ493
2 Mtr Rfl Bn	LTC ZABUDSKIY, K.	BQW467
3 Mtr Rfl Bn		IVH435
Mdm Tk Bn	LTC SHISHKEVICH, Y.	VEA276
ATGM Btry		ZIB507
AA Btry		GKR932
Sig Co		QRL199

(a) 2 Motorized Rifle Battalion, 40 MRR, 128 MRD, 10 CAA.

Code Name—

Code Number—BOW467

Unit	Commander	Code No.
CO	LTC ZABUDSKIY, K.	
CofS	MAJ BARASHKIN, Y.	
HQ	LT PONOMAREV, F.	
1 Mtr Rfl Co	CPT MILKOV, Y.	
3 Mtr Rfl Co	SrLT OKRUZHNOV, I.	
Mort Btry	CPT KARNOZOV, A.	

(b) Medium Tk Battalion, 40 MRR, 128 MRD, 10 CAA.**Code Name—****Code Number—**

Unit	Commander	Code No.
CO	LTC SHISHKEVICH, Y.	
CofS	MAJ TSIPORUKH, U.	
2 Mdm Tk Co	CPT SRETENSKIY, R.	
3 Mdm Tk Co	CPT ALEKHIN, Ya.	

(2) 46 Motorized Rifle Regiment, 128 MRD, 10 CAA.**Code Name—****Code Number—**

Unit	Commander	Code No.
CO	COL ZHELNIN, E.	
DC	LTC SHCHEDRIN, M.	
CofS	LTC YELIN, W.	
HQ Elm		UWZ089
Recon Co		LKC331
1 Mtr Rfl Bn		BCG427
3 Mtr Rfl Bn	LTC DAVIDENKO, O.	
How Btry		MTU777
AA Btry		SYK198

(3) 152 Medium Tk Regiment, 128 MRD, 10 CAA.**Code Name—****Code Number—CTZ328**

Unit	Commander	Code No.
CO	COL SVIRIDENKO, C.	
DC	LTC BLAZHUK, G.	
CofS	LTC OGLANOV, H.	
Recon Co		XMZ396
1 Mdm Tk Bn		ANR057
3 Mdm Tk Bn	LTC MIKHAYLOV, Y.	
Engr Co		FOE101

(4) Division Artillery Elements, 128 MRD, 10 CAA.

Unit	Commander	Code No.
DC	LTC LESHCHINSKIY, B. P.	
12G Arty Regt.		OUA076
20 122mm How Bn		OLK953
108 122mm How Bn		ACE342
73 AT Bn	LTC VAYNBERG, D. E.	
103 FROG Bn	LTC REVA, A. S.	TZP421
U/I MRL Bn		YFV697
89 AA Regt		NDI526

b. 130 Guards Motorized Rifle Division, 10 CAA.

Code Name—BOL'NOY ZUB

Code Number—UBQ631

Unit	Commander	Code No.
CG	LTG KHARIN, D.	
FDC	MG SASHIN, L.	
CofS	MG DULEPOV, A.	
HQ Elm		GEN476
11 GMRR		PGB421
48 GMRR	COL SLEPOV, A.	
191 GMRR	COL KHMELEV, V.	UPQ145
1 GMTR	COL CHETYRIKIN, A.	ZVW309
83 Arty Regt		LYZ259
28 122mm How Bn	LTC TSOKOLOV, Z.	
41 122mm How Bn	LTC LIKHACHEV, I.	
U/I Indep Tk Bn		IXG742
U/I Recon Bn		CID594
U/I Engr Bn		DSM521
23 Sig Bn	LTC ALEXEIEV, V.	HQF933
U/I Cml Bn	LTC DATKIN, E.	
U/I Mt Bn		VHX839
U/I Maint Bn		EAQ641
50 Med Bn	LTC KHOBOTOV, A.	
CofR		QWS963

Unit History. Awarded the "GUARDS" designation for previous outstanding combat actions. Reassigned from the 91st Guards Tank Army in _____.

(1) 1 Guards Medium Tank Regiment, 130 GMRD, 10 CAA.**Code Name—****Code Number—ZVW309**

Unit	Commander	Code No.
CO	COL CHETYRIKIN, A.	
DC	LTC VILINOV, Y.	
Recon Co	CPT ANTOKOLSKI, G.	IBL321
2 Mdm Tk Bn		KRH096

(2) U/I Reconnaissance Battalion, 130 GMRD, 10 CAA.**Code Name—****Code Number—CIDC594**

Unit	Commander	Code No.
CofS	MAJ ZAYNULIN, S.	
Amph Tk Co	SrLT KOPETSKIY, N.	
LRR Co	CPT RAKHMANOV, F.	

c. 134 Motorized Rifle Division, 10 CAA.**Code Name—****Code Number—ZIV792**

Unit	Commander	Code No.
CG	LTG GOLOVCHENKO, R.	
FDC	MG KODIN, N.	
CofS	MG KISELEV, Y.	
HQ Elm		RLT222
2 MRR	COL KOSAREV, M.	WXY831
28 MRR	COL VASILINENKO, A.	KCF729
101 MRR		CGA658
13 MTR		TUC170
U/I Indep Tk Bn	LTC GREGORIVICH	
U/I Recon Bn		MZR371
U/I Engr Bn		NRL402
U/I MT Bn		OEM949
62 Sig Bn		DPZ101
CofR	COL GLEBOV, P.	

Unit History. Reactivated and assigned to the NORTHERN FRONT as part of the 10th Combined Arms Army in _____. Brought up to full strength with

the assignment of filler personnel in _____. Subordinate units were hampered with initial shortages of communications and engineer equipment in some unit training programs. All units are now assumed to be fully equipped and combat ready.

(1) Division Artillery Elements, 134 MRD, 10 CAA.

Unit	Commander	Code No.
CRTA	COL GURIN, I.	
DC	LTC REZNICHENKO, L.	
CofS	LTC ZHUGAN, D.	
U/I Arty Regt		UAD593
195 122mm How Bn		NOA619
242 122mm How Bn		UEA777
U/I FROG Bn	LTC ISHCHENCO, A.	ZPW867
37 MRL Bn	LTC RAKHLITSKIY, C.	FVU503
U/I AA Regt		DIP509

(a) U/I Free Rocket Over Ground Battalion, 134 MRD, 10 CAA.

Code Name—

Code Number—ZPW867

Unit	Commander	Code No.
CO	LTC ISHCHENCO, A.	
CofS	MAJ KOSTYUCHENKO, C.	
1 FROG Btry		ENO829
2 FROG Btry	CPT FILIPP, I.	GBZ809

(b) 37 Multiple Rocket Launcher Battalion, 134 MRD, 10 CAA.

Code Name—

Code Number—FVU503

Unit	Commander	Code No.
Co	LTC RAKHLITSKIY, C.	
2 122mm RL Btry	CPT PANKRATOV, B.	
3 122mm RL Btry	SrLT YUSUPOV, Yu.	

(2) U/I Engineer Battalion, 134 MRD, 10 CAA.**Code Name—****Code Number—NRL402**

Unit	Commander	Code No.
CofS	MAJ IVANOV, M.	
Tech Co	CPT SOROKIN, A.	
Pon Co	SrLT DYADIN, Q.	
Amph Co	CPT SHCHEGLOV, E.	

d. 80 Medium Tank Division, 10 CAA.**Code Name—UMNY MAL'CHIK****Code Number—AVE821**

Unit	Commander	Code No.
FDC	MG RAZINKIN, K.	
CofS	MG IGNAT'YEV, S.	
3 MTR		PQG147
20 MTR		VWI863
21 MTR	COL GOLOVANOV, P.	IDQ585
103 MRR		SMX796
28 Arty Regt		XPO244
22 122mm How Bn	LTC KURASHOV, Ye.	
53 122mm How Bn	LTC CHIZHIKOV, A.	
47 MRL Bn		
28 AA Regt		
U/I Recon Bn	LTC TISHCHENKO, Yu.	
U/I Engr Bn		WSH089
65 MT Bn		AOT987
39 Cml Bn		
CofR		HXN647

Unit History. Reassigned from the 37th Tank Army, a Homeland unit, when the 10th Combined Army was activated. Subordinate tank units were recently equipped with T-62 medium tanks.

e. 146 Pontoon Regiment, 10 CAA.**Code Name—ZHARKIY DEN'****Code Number—**

Unit	Commander	Code No.
CO	COL YAKIN, E.	YKE066
DC	LTC SIROTKIN, Yu.	
Svc Co		LYN673
1 Brg Bn	LTC APRAKSIN, T.	TBV687
2 Brg Bn	LTC DERKACH, V.	HEP626

f. 51 Artillery Regiment, 10 CAA.**Code Name—CHISTAYA VODA****Code Number—OZI087**

Unit	Commander	Code No.
DC	LTC MOROZOV, Z.	
CofS	LTC PROTCHENKO, Yu.	
H&S Btry		CFD605
70 130mm Gun Bn	LTC VORONOV, V.	GAL666
U/I 152mm G/H Bn	LTC KOPYLOV, A.	UCF473
Tgt Acq Btry		KVQ088

(1) 70 130 mm Gun Battalion, 51 Army Arty Regt, 10 CAA.**Code Name—****Code Number—GAL666**

Unit	Commander	Code No.
CO	LTC VORONOV, V.	
CofS	MAJ GOL'TSMAN, Yu.	
1 130mm Gun Btry	CPT GROMOZDOV, A.	
3 130mm Gun Btry	SrLT SHUL'PIS, I.	

(2) U/I 152mm Gun-Howitzer Battalion, 51 Army Arty Regt, 10 CAA.**Code Name—****Code Number—UCF473**

Unit	Commander	Code No.
CO	LTC KOPYLOV, A.	
CofS	MAJ CHAGIN, S.	
3 152mm G/H Btry	CPT KAZAKOV, Yu.	

g. 36 SCUD Surface-To-Surface Missile Brigade, 10 CAA.**Code Name—OCHI CHERNYE****Code Number—CGK461**

Unit	Commander	Code No.
CG	MG BOYECHO, M.	
FCD	COL VASIL'YEV, B.	
H&S Btry		ZRI010
1 SCUD SSM Bn	LTC GUGIN, N.	RLW067
2 SCUD SSM Bn		EMH006

(1) 1 SCUD SSM Battalion, 36 Army SCUD SSM Bde, 10 CAA.**Code Name—****Code Number—RLW067**

Unit	Commander	Code No.
CO	LTC GUGIN, N.	
CofS	MAJ SIDOROV, A.	
1 SCUD SSM Btry	CPT SHMYGA, Yu.	ADX847
3 SCUD SSM Btry		PWR591

h. Air Defense Elements, 10 CAA.

Unit	Commander	Code No.
U/I GANEF SAM Bde	COL AKSENOV, Yu.	VUO077
U/I GAINFUL SAM Regt	COL YUSHKIN, N.	IPS426

(1) U/I GAINFUL Surface-To-Air Missile Brigade, 10 CAA.**Code Name—****Code Number—VUO077**

Unit	Commander	Code No.
CO	COL AKSENOV, Yu.	
DC	LTC BESPALOV, C.	
1 GANEF SAM Bn	LTC SHUMSKOV, A.	NOB831
2 GANEF SAM Bn		BZK038

(2) U/I GAINFUL Surface-To-Air Missile Regiment, 10 CAA.**Code Name—****Code Number—IPS426**

Unit	Commander	Code No.
CO	COL YUSHKIN, N.	
CofS	LTC RUDNEY, B.	
1 GAINFUL SAM Bn		QGT581
2 GAINFUL SAM Bn	LTC NILOV, K.	

i. U/I Engineer Brigade 10 CAA.**Code Name—****Code Number—VUW845**

Unit	Commander	Code No.
DC	LTC BARANOV, Yu.	
U/I Engr Bn	LTC KOZHAYEV, V.	WIA036
U/I Engr Bn	LTC BORZYKH, M.	DQY744

j. 61 Intelligence Battalion, 10 CAA.**Code Name—****Code Number—TBC914**

Unit	Commander	Code No.
CO	LTC YALFEROV, H.	
CofS	MAJ LEVITSKIY, A.	
CP Spt Elm	MAJ VAKHRUSHEV, O.	MXC968
Intg Co		FSM482
Col Co		SHZ955

k. U/I Signal Intercept Battalion, 10 CAA.**Code Name—****Code Number—KMT917**

Unit	Commander	Code No.
CofS	MAJ VOLODIN, C.	
Rdo DF Co		XNU111
Rdr Intcp Co		OTG000

B-4. 18 Combined Arms Army.**Code Name—KRASNAYA ZVEZDA****Code Number—**

Unit	Commander	Code No.
CG	A/GEN UMANSKIY, D.	
FDC	C/GEN SUROROV, S.	
CofS	LTG STARKOV, L.	
H&S Elm		LYN444
2 GMRD	LTG ZDETOVETSKIV, I.	HEP824
6 GMRD	LTG ADASHEVSKIY, P.	TBV636
62 GMRD	LTG ANTU'YEV, A.	YKE094
11 TKD	LTG TAMBOVTSEV, Ye.	FDB567
15 TKD	LTG ZABOLOTNYY, F.	ALN901
107 Pon Regt	COL DUKHIN, Ya.	
15 Arty Regt		CFX209
25 SCUD SSM Bde	MG BLAGONRAVOV, B.	
33 SAM Bde (GANEF)	COL KRYUCHKOV, O.	
24 SAM Regt (GAINFUL)	COL TELESHEV, O.	
43 Engr Bde		RIS839
2 Engr Bn	LTC FOMICHEV, B.	
14 Engr Bn	LTC ALEKSEYEV, N.	
12 Engr Bn (CONST)		FXE616
U/I Intel Bn		LWM007
U/I Sig Intcp Bn		MHK157
68 Cml Bn		QRB534
CofR		DXT717

Unit History. Reassigned from Homeland Forces in _____ when the NORTHERN FRONT was activated. Brought up to full strength with the assignment of the 2d and 6th Guards Motorized Rifle and 15th Tank Divisions in _____.

a. 2 Guards Motorized Rifle Division, 18 CAA.**Code Name—****Code Number—HEP824**

Unit	Commander	Code No.
CG	LTG ZDETOVETSKIV, I.	
CofS	MG BAVER, N.	
HQ Elm		WRO401

Unit	Commander	Code No.
9 GMRR	COL SINITSYN, P.	UOP905
16 GMRR	COL ARENSKI, C.	
185 GMRR	COL ARTYBASHEV, I.	PSF484
2 GMTR		OBD426
U/I Indep Tk Bn	LTC TARASOV, A.	
35 Recon Bn	LTC VISHIN, S.	GTA682
62 Engr Bn		IAH709
U/I Sig Bn	LTC APPRAXIN, H.	
U/I Cml Bn	LTC LARIN, A.	
U/I MT Bn		XCU534
8 Maint Bn		OBE301
CofR		QYZ572

Unit History. Date of organization is unknown; unit was awarded the "GUARDS" designation for outstanding performance in several campaigns. Assigned to the 18th Combined Arms in _____. Subordinate tank units were recently equipped with the T-62 medium tanks.

(1) 9 Guards Motorized Rifle Regiment, 2 GMRD, 18 CAA.

Code Name—DED MOROZ

Code Number—UOP905

Unit	Commander	Code No.
CO	COL SINITSYN, P.	
CofS	LTC GATYCH, S.	
Recon Co.	CPT GUROV, R.	
2 Mtr Rfl Bn	LTC LOYKE, V.	SMG762
Mdm Tk Bn		HZV485
How Btry	CPT SAVICH, Ye.	NUQ209

(a) 2 Motorized Rifle Battalion, 9 GMRR, 2 GMRD, 18 CAA.

Code Name—

Code Number—SMG762

Unit	Commander	Code No.
CO	LTC LOYKE, V.	
CofS	MAJ TOKARCHUK, P.	
1 Mtr Rfl Co	CPT MAMET, A.	
2 Mtr Rfl Co	CPT GLUKH, G.	
3 Mtr Rfl Co	SrLT UTKIN, O.	
ATGM Plt	LT SHUSHKOV, L.	

Unit	Commander	Code No.
(b) Medium Tank Battalion, 9 GMRR, 2 GMRD, 18 CAA.		
Code Name—		
Code Number—HZV485		

Unit	Commander	Code No.
CofS	MAJ SAYINKOV, Yu.	
1 Mdm Tk Co	CPT CHABANOV, L.	
3 Mdm Tk Co	CPT MARKOV, A.	

(2) 16 Guards Motorized Rifle Regiment, 2 GMRD, 18 CAA.

Code Name —
Code Number —

Unit	Commander	Code No.
CO	COL ARENSKI, C.	
DC	LTC USIK, B.	
Recon Co		TGL634
1 Mtr Rfl Bn		YNE379
3 Mtr Rfl Bn	LTC FILATOV, N.	
How Btry		EPI126
ATGM Btry		BVW847

(a) 1 Motorized Rifle Battalion, 16 GMRR, 2 GMRD, 18 CAA.

Code Name—
Code Number—YNE379

Unit	Commander	Code No.
CofS	MAJ TODOROV, N.	
1 Mtr Rfl Co	CPT PROKUSHEV, D.	
2 Mtr Rfl Co	CPT SUMAKOV, I.	
Mort Btry	CPT ZAYTSEV, O.	

(b) 3 Motorized Rifle Battalion, 16 GMRR, 2 GMRD, 18 CAA.

Code Name—
Code Number—

Unit	Commander	Code No.
CO	LTG FILATOV, N.	
CofS	MAJ BEREZKO, V.	
3 Mtr Rfl Co	CPT PUSHKIN, N.	
ATGM Plt	LT BASMANOV, A.	

(3) 185 Guards Motorized Rifle Regt, 2 GMRD, 18 CAA**Code Name—****Code Number—PSF484**

Unit	Commander	Code No.
CO	COL ARTYBASHEV, I.	
DC	LTC RUDOY, V.	
Recon Co		KER942
3 Mtr Rfl Bn		DBV866
Mdm Tk Bn	LTC MOZOLIN, Yu.	
How Btry		LN188

(a) 3 Motorized Rifle Battalion, 185 GMRR, 2 GMRD, 18 CAA.**Code Name—****Code Number—DBV866**

Unit	Commander	Code No.
CofS	MAJ TARAN, V.	
1 Mtr Rfl Co	SrLT AGAPOV, L.	
3 Mtr Rfl Co	CPT MALINKIN, V.	
Mort Btry	CPT OSHKIN, G.	

(b) Medium Tank Battalion, 185 GMRR, 2 GMRD, 18 CAA.**Code Name—****Code Number—**

Unit	Commander	Code No.
CO	LTC MOZOLIN, Yu.	
CofS	MAJ USTINOV, V	
2 Mdm Tk Co	CPT APUKHTIN, M.	
3 Mdm Tk Co	CPT PILIPETS, V.	

(4) 2 Guards Medium Tank Regiment, 2 GMRD, 18 CAA.**Code Name—****Code Number—OBD426**

Unit	Commander	Code No.
DC	LTC PISAREV, C.	
CofS	LTC ROZIT, A.	
1 Mdm Tk Bn	LTC BUBNOV, N.	FXG088
3 Mdm Tk Bn	MAJ LADIS, I.	

(5) Division Artillery Elements, 2 GMRD, 18 CAA.

Unit	Commander	Code No.
DC	LTC OBLACHKOV, F.	
91 Arty Regt		QCB173
35 122mm How Bn	LTC POTEYENKO, G.	
45 122mm How Bn	LTC PETROVSKIY, N.	
16 152mm How Bn		KAA999
Tgt Acq Btry	CPT SUKOV, A.	
52 AT Bn		ISH846
74 FROG Bn		LWQ938
32 MRL Bn	LTC MEDNIKOV, N.	
33 AA Regt		CIH672

(6) 62 Engineer Battalion, 2 GMRD, 18 CAA.**Code Name—****Code Number—IAH709**

Unit	Commander	Code No.
CofS	MAJ BRYKIN, O.	
Tech Co	CPT NEDBAY, Ya.	
Pon Co	CPT LADIN, C.	

b. 6 Guards Motorized Rifle Division, 18 CAA.**Code Name—ZAPANDY VETER****Code Number—TBV636**

Unit	Commander	Code No.
CG	LTG ADASHEVSKIY, P.	
CofS	MG MAGKAYEV, R.	
3 GMRR	COL YURASOV, A.	HKY478
21 GMRR	COL SOLDATOV, K.	
142 GMRR	COL AZBUKIN, S.	XTR401
30 GMTR	COL STEPULK, R.	ROL318
U/I Indep Tk Bn	LTC BERIA, L.	
63 Arty Regt		IEA444
66 122mm How Bn		PRC712
24 152mm How Bn		EYI749
43 MRL Bn	LTC KOLUBKOV, S.	
19 AA Regt		BFF798

Unit	Commander	Code No.
28 Recon Bn	LTC RYBAKOV, O.	SFK296
U/I Engr Bn	LTC KUKLIN, B.	
U/I Sig Bn	LTC CHAGIN, L.	
31 Cml Bn	LTC ORLOV, V.	BDT086
U/I MT Bn	LTC KOTA, A.	
43 Med Bn	LTC LATUKHIN, R.	
CofR	COL STEPANOV, S.	KYI947

Unit History. Unit is thought to be one of the oldest divisions in the military establishment with the exact date of activation unknown. Reorganized and reassembled to the 18th Combined Arms Army from Homeland Forces in _____.

c. 62 Guards Motorized Rifle Division, 18 CAA.

Code Name—PEPEL'NITSA

Code Number—YKE094

Unit	Commander	Code No.
CG	LTG ANTU'YEV, A.	
FDC	MG CHERVYAKOV, V.	
CofS	MG BRONEVICH, A.	
68 GMRR		
85 GMRR		
130 GMRR	COL MIGUNOV, M.	TAZ847
99 GMTR	COL YUSHNYY, V.	
U/I Indep Tk Bn	LTC SHELEDINOV, A.	
78 AT Bn		ZFX650
83 FROG Bn		GOP282
12 MRL Bn	LTC BOLOTOV, S.	
7 Arty Regt		ROA400
48 Cml Bn	LTC DEMIDOV, E.	
49 Recon Bn	LTC GORBICH, S.	
U/I Engr Bn		YZH307
U/I MT Bn	LTG SHOTKIN, H.	
CofR		CUO482

Unit History. Reassigned to the NORTHERN FRONT as part of the 18th Combined Arms Army in _____. Awarded the "GUARDS" designation for outstanding performance in several campaigns. Subordinate tank units were recently equipped with T-62 medium tanks.

D. 11 Medium Tank Division, 18 CAA.**Code Name—DLINNY NOS****Code Number—FDB567**

Unit	Commander	Code No.
CG	LTG TAMBOVTSEV, Ye.	
CofS	MG MANEVICH, O.	
96 MTR		
104 MTR		
117 MTR	COL SAVCHUK, L.	TAZ860
U/I MRR	COL STRIGUNOV, F.	AHD427
40 FROG Bn		LGE225
U/I Arty Regt		WAA083
32 122mm How Bn	LTC GORBUNOV, I.	
61 122mm How Bn	LTC SIDORENKO, A.	
56 MT Bn		SIW206
CofR	COL SOROK, K.	

Unit History. Dates of activation and assignment to the 18th Combined Arms Army are unknown. Identified shortly after the reassignment of the 18th Combined Arms Army to the NORTHERN FRONT. Subordinate tank units are thought to be still equipped with the T-54/55 medium tank.

e. 15 Tank Division, 18 CAA.**Code Name—****Code Number—ALN901**

Unit	Commander	Code No.
CG	LTG ZABOLOTNYY, F.	
FDC	MG AMRAMOVICH, T.	
CofS	MG ZEVAKIN, P.	
18 MTR	COL AVERESCU, D.	CUO964
U/I MTR		MGU897
26 MTR	COL SIDORKIN, R.	ZVN004
137 MRR	COL TAKOV, V.	
61 FROG Bn	LTC SHIGAYEV, M.	
63 AA Regt		HVZ535
U/I Arty Regt		CMZ322
212 122mm How Bn		MZZ393
238 122mm How Bn		VAB362

Unit	Commander	Code No.
U/I Recon Bn		GLF664
U/I Engr Bn		NEP329
U/I Cml Bn	LTC ALIKHANOV, V.	
73 Sig Bn		TAP683

Unit History. Reassigned from Homeland forces in _____. Believed to be still equipped with the T-54/55 series of tanks, although the possibility of subordinate units having only the T-62 medium tank cannot be ruled out.

f. 15 Artillery Regt, 18 CAA.

Code Name—TUPOY NOZH

Code Number—CFX209

Unit	Commander	Code No.
DC	LTC PUTYATA, G.	
CofS	LTC ADASHEV, P.	
30 130mm Gun Bn		PIW249
33 152mm G/H Bn	LTC FROLOV, N.	YAC333
Tgt Aeq Btry		VWX048

B-5 7 Guards Tank Army.

Code Name—

Code Number—DKM731

Unit	Commander	Code No.
CG	A/GEN ZELKIN, W.	
FDC	C/GEN GENTSARYUK, D.	
CofS	LTG KORKIN, K.	
H&S Elm		ERA532
130 GTD	LTG MASAGUTOV, Z.	
134 GTD	LTG KISLYAKOV, P.	
15 GMRD		
100 Pon Regt		
60 Arty Regt	COL MIGUR, S.	BVT064
15 SCUD SSM Bde		NMQ437
64 Engr Bde		CBG549

Unit	Commander	Code No.
U/I MT Regt		SHK147
U/I Intel Bn	LTC RUBINSHETYN, V.	
U/I Sig Intcpt Bn	LTC SHERSTUYUK, I.	
58 Med Regt		
21 Sig Regt		
CofR		KYR737

Unit History. Unit recently received the "GUARDS" designation upon assignment to the NORTHERN FRONT. Unlocated major elements include the 20th and 40th Guards Tank Divisions and the 34th Guards Artillery Regiment which were organic units to this organization while in the Homeland.

a. 130 Guards Medium Tank Division, 7 GTA.

Code Name—TONKIY VOLOS

Code Number—

Unit	Commander	Code No.
GC	LTG MASAGUTOV, Z.	
FDC	MG ALYAVYEV, K.	
HQ Elm	CPT AFINOGENOV, B.	
9 GMTR	COL IGNATENKOV, B.	TRM694
105 GMTR		OLD437
U/I GMTR	COL VERGOPULO, Yu.	PCS269
U/I GMRR	COL MAIYEVSKIY, T.	
101 FROG Bn		
30 AA Regt		
9 Arty Regt		
77 122mm How Bn		KVZ808
142 122mm How Bn		GAH010
U/I Recon Bn		DTV597
U/I Engr Bn		YIE068
U/I Svc Elm	COL NAUMOV, L.	
40 MT Bn		AZI178
83 Cml Bn	LTC MARGELOV, N.	

Unit History. Date of activation and assignment are unknown, unit was identified when assigned as part of the 7th Guards Tank Army to the NORTHERN FRONT in _____.

b. 134 Guards Medium Tank Division, 7 GTA**Code Name—NASTOL'NAYA LAMPA****Code Number—**

Unit	Commander	Code No.
CG	LTG KISLYAKOV, P.	
CofS	MG BOGDANOV, E.	
22 GMTR	COL YERMILKO, V.	
U/I GMTR		HDN485
111 GMTR	COL MORDKOVICH, A.	
U/I GMRR	COL KRYCHKOV, D.	
26G Arty Regt	COL ANTONYUK, M.	
19 122mm How Bn	LTC KALACHNINOV, G.	
36 122mm How Bn		
101 122mm How Bn	LTC DOROSHENKO, V.	
U/I Recon Bn	LTC GORYNIN, N.	ZGH295
U/I Engr Bn	LTC PUSHAREV, W.	UOF414
U/I MT Bn	LTC MYSKOV, C.	
11 Maint Bn		

Unit History. Date of activation is unknown; first identified in the Homeland as part of the 98th Combined Arms Army where it was awarded the "GUARDS" designation. In _____ the 134th Guards Medium Tank Division was resubordinated to the 7th Guards Tank Army and acted as the advance division for the Army's deployment.

c. 15 Guards Motorized Rifle Division, 7 GTA.**Code Name—KNIZHNY SHKAF****Code Number—**

Unit	Commander	Code No.
FDC	MG RYZHAVSKIY, V.	
CofS	MG FAYENOV, I.	
HQ Elm		GUY481
19 GMRR	COL KHROBOSTOV, E.	VNO544
79 GMRR	COL BANNYKH, Ye.	
U/I GMRR	COL GORSHKOV, P.	
16 GMTR		QSA161

Unit	Commander	Code No.
U/I Indep Tk Bn	LTC BUDNEY, Y.	
81 AT Bn	LTC TRUSHIN, M.	
78 Arty Regt		
123 122mm How Bn		
22 152mm How Bn		IXZ676
26 Recon Bn	LTC BUNEVICH, M.	
18 Engr Bn	LTC KOROBKOV, L.	
U/I Cml Bn	LTC GUKOV, V.	
U/I Maint Bn	LTC PANKOV, Z.	
80 Med Bn		

Unit History. Organized in _____ as a modified motorized rifle division, reorganized in _____ and reassigned to the 7th Tank Army prior to its receipt of the "GUARDS" designation.

(1) 19 Guards Motorized Rifle Regiment, 15 GMRD, 7 GTA.

Code Name—

Code Number—

Unit	Commander	Code No.
CO	COL. KHROBOSTOV, E.	
DC	LTC SIDOROVICH, M.	
1 Mtr. Rfl Bn		EPG809
2 Mtr Rfl Bn	LTC SAKHNO, Z.	
3 Mtr Rfl Bn	LTC SERDIN, Ya.	IWX138
Mdm Tk Bn	LTC SHAYEV, B.	
ATGM Btry		WXP266

(2) 18 Engineer Battalion, 15 GMRD, 7 GTA

Code Name—

Code Number—

Unit	Commander	Code No.
CO	LTC KOROBKOV, L.	
CofS	MAJ LUKASH, I.	
Pon Co	CPT KOSLOV, B.	
Amph Co	CPT RAZHEV, Z.	

d. 100 Pontoon Regiment, 7 GFA

Code Name--

Code Number--

Unit	Commander	Code No.
CO	LTC COREV, Ye.	
Svc Co	Sgt GREENK, E.	
1 Brg Bn	LTC GEROZDOV, I.	7AB003
2 Brg Bn	LTC KAPCOV, E.	

e. 60 Artillery Regt, 1 GFA

Code Name--POLSHYYE OCHKI

Code Number--3VTC34

Unit	Commander	Code No.
CO	COL MIGUR, S.	
DC	LTC ASTRATOV, V.	
15 130mm Gun Bn	LTC DENIDOV, Ye.	
U/I 130mm Gun Bn	LTC REYZA, N.	VTN137
26 152mm G/H Bn		MQO435
Tgt Acq Btry		BCF000

f. 13 SCUD Surface-to-Surface Missile Brigade, 7 GFA

Code Name--

Code Number--NMQ437

Unit	Commander	Code No.
FDC	COL GROMKO, S.	
ColS	COL LUBINSKY, R.	
1 SCUD Bn		TKV073
2 SCUD Bn		12751
3 SCUD Bn		12752
2 SCUD SCM Bn		RMG843

g. Air Defense Elements, 7 GFA.

Unit	Commander	Code No.
43 SAM BATTAL	COL AN DREYEV, Z.	LDQ582
1 SAM BATTAL		CSW509
2 SAM BATTAL	LTC AN DREYEV, Z.	
22 SAM BATTAL	COL AN DREYEV, Z.	
2 SAM BATTAL		KUB476

h. 64 Engineer Bde, 7 GtA.**Code Name—****Code Number—CBG549**

Unit	Commander	Code No.
DC	LTC SHUPENEY, S.	
3 Engr Bn		TVC401
11 Engr Bn	LTC TUZOV, K.	IEH622
13 Engr Bn		
22 Engr Bn (CONST)		

B-6. 11 Guards Tank Army.**Code Name—MEDOVY MESYATS****Code Number—MPS842**

Unit	Commander	Code No.
CG	A/GEN MYACHIN, E.	
FDC	C/GEN KULIKOV, G.	
CofS	LTG LOBKO, U.	
H&S Elm		ZIR836
1 GTD	LTG KOVACHEVICH, V.	DNX481
12 TKD	LTG ALCHEVSKY, P.	
125 GTD	LTG GAPONENKO, C.	
635 Arty Regt		GHA507
14 SCUD SSM Bde	MG YAKOVLEV, Z.	OKF359
23 Engr Bde		NOE299
41 Intel Bn	LTC MALANCHEV, Yu.	
U/I Sig Intcp Bn	LTC KHOLODOV, H.	
35 Sig Regt		FFZ098
66 Cml Bn		
73 Psyops Co		
CofR	COL RATNIKOV, D.	

Unit History. Date of activation is unknown; reorganized in the Homeland prior to deployment to the NORTHERN FRONT area. Major unlocated units which were organic in the Homeland include the 17th and 78th Guards Tank Divisions and the 10th and 20th Guards Motorized Rifle Divisions.

a. 1 Guards Medium Tank Division, 11 GTA.

Code Name—

Code Number—DNX481

Unit	Commander	Code No.
CG	LTG KOVACHEVICH, V.	
CofS	MG GOLUBEV, Z.	
HQ Elm	CPT MURATOV, G.	
4 GMTR	COL INOZEMLSEV, G.	
10 GMTR	COL OKHOTNIKOV, E.	
17 GMTR	COL AGOSHKOV, T.	FWS711
23 GMRR	COL BELYARMINOV, I.	PGT767
U/I Recon Bn		XPU941
6 Engr Bn	LTC MOL'KOV, D.	
U/I MT Bn		ABZ018
20 Sig Bn		
CofR	COL NEMANOV, E.	

Unit History. Activated in _____; believed to be one of the oldest units in the military establishment. Assigned to the 11th Guards Tank Army when the army was formed. Unit is believed to have one of the highest priorities in the NORTHERN FRONT for personnel and equipment replacements.

(1) 4 Guards Medium Tank Regiment, 1 GTD, 11 GTA.

Code Name—SEVERNY POLYUS

Code Number—

Unit	Commander	Code No.
CO	COL INOZEMLSEV, G.	
DC	LTC OLEJNIKOV, A.	
Recon Co	CPT SOMSIKOV, Yu.	
1 Mdm Tk Bn		TNE886
2 Mdm Tk Bn	LTC BATUSHEV, K.	QOY497
3 Mdm Tk Bn		LPV939
Svc Co	CPT BRUSOV, Z.	

(2) 10 Guards Medium Tank Regiment, 1 GTD, 11 GTA

Code Name—

Code Number—

Unit	Commander	Code No.
CO	COL OKHOTNIKOV, E.	
DC	LTC KIROV, K.	

Unit	Commander	Code No.
Engr Co		CFP987
Recon Co	CPT GUSEV, H.	
1 Mdm Tk Bn	LTC MAKEYEV, G.	KVF079
3 Mdm Tk Bn	LTC KLOCHKOV, M.	ZIS241

(3) 17 Guards Medium Tank Regiment, 1 GTD, 11 GTA.

Code Name—

Code Number—FWS711

Unit	Commander	Code No.
CO	COL AGOSHKOV, T.	
CofS	LTC KOSTYANKO, T.	
Engr Co		RLA503
1 Mdm Tk Bn	LTC MNOGIN, V.	MGQ832
2 Mdm Tk Bn		DQG100
3 Mdm Tk Bn	LTC RIVZHA, S.	SWN861

(4) 23 Guards Motorized Rifle Regiment, 1 GTD, 11 GTA.

Code Name—

Code Number—PGT767

Unit	Commander	Code No.
CO	COL BELYARMINOV, I.	
CofS	LTC GALKIN, M.	
Recon Co		UBW156
2 Mtr Rfl Bn	LTC POLYAKOV, I.	VCL722
Mdm Tk Bn	LTC BULAKOV, P.	

(5) Division Artillery Elements, 1 GTD, 11 GTA.

Unit	Commander	Code No.
CRTA	COL ZABOLOTNYY, T.	
CofS	LTC TUNIK, O.	
U/I Arty Regt		EHR104
55 122mm How Bn		
138 122mm How Bn	LTC GOL'DBERG, Yu.	
14 FROG Bn	LTC GRABER, M.	
59 AA Regt	COL POPOV, C.	
24 MRL Bn		

b. 12 Tank Division, 11 GTA.

Code Name—GOLUBOYE NEBO

Code Number—

Unit	Commander	Code No.
CG	LTG ALCHEVSKY, P.	
CofS	MG AKSELROD, F.	
HQ Elm		IRX615
38 MTR	COL MANDRUKEVICH, V.	NXC550
U/I MTR		HAI766
52 MTR	COL POLISHCHUK, M.	
135 MRR		
89 FROG Bn		
85 Arty Regt		
U/I Recon Bn	LTC TENININ, G.	
U/I Engr Bn	LTC TRIFONOV, A.	YDH461
U/I Cml Bn		OEK585
U/I Med Bn		AYT244
U/I MT Bn		WSV767
CofR	COL AKOVENKO, B.	

Unit History. Date of activation is unknown; formerly organic to the 94th Combined Arms Army prior to its subordination to the 11th Guards Tank Army in _____. Unit is believed to be still equipped with the T-54/55 series of tanks.

(1) 52 Medium Tank Regiment, 12 TKD, 11 GTA.

Code Name—KHOLODIL'NIK

Code Number—

Unit	Commander	Code No.
CO	COL POLISHCHUK, M.	
1 Mdm Tk Bn	LTC MATROSOV, H.	GTM752
2 Mdm Tk Bn	LTC TRUNOV, K.	
3 Mdm Tk Bn		XMD614

(2) U/I Reconnaissance Battalion, 12 TKD, 11 GTA

Code Name—

Code Number—

Unit	Commander	Code No.
CO	LTC TENININ, G.	
CofS	MAJ ALIFANOV, L.	

Unit	Commander	Code No.
Amph Tk Co	CPT VRAGIN, A.	
LRR Co	CPT SOKOLOV, P.	

c. 125 Guards Medium Tank Division, 11 GTA.

Code Name—SKOVORODKA

Code Number—

Unit	Commander	Code No.
CG	LTG GAPONENKO, C.	
CofS	MG ANNENSKY, L.	
HQ Elm	CPT MALIK, B.	
109 GMTR		
116 GMTR	COL YUKHIMIK, A.	PUO070
U/I GMTR	COL KRUGLYAK, K.	
186 GMRR		
57 FROG Bn		
9 MRL Bn	LTC GNATCHENKO, I.	
97G Arty Regt		PSK972
81 122mm How Bn		
140 122mm How Bn	LTC SHLOMIN, N.	
33 Recon Bn	LTC ANDRIANOV, D.	NEP258
13 Engr Bn		OYB751
U/I Cml Bn	LTC TARASOV, I.	

Unit History. Organized by expanding the 125th Heavy Tank Regiment in _____. Tank units which were formerly equipped with the T-10M were issued the T-62 medium tank prior to the unit's subordination to the 11th Guards Tank Army in _____.

(1) 116 Guards Medium Tank Regiment, 125 GTD, 11 GTA.

Code Name—DAL'NY VOSTOK

Code Number—PUO070

Unit	Commander	Code No.
CO	COL YUKHIMIK, A.	
DC	LTC DANILIN, G.	
Engr Co		PVI003
2 Mdm Tk Bn	LTC UPOROV, M.	FPR294
AA Btry	CPT GRISHKO, N.	VFX585

(2) 13 Engineer Battalion, 125 GTD, 11 GTA
Code Name—
Code Number—OYB751

Unit	Commander	Code No.
CofS	MAJ KASHIN, N.	
Tech Co	CPT SHILOV, V.	
Pon Co	CPT SEKIRIN, P.	

d. 635 Guards Artillery Regt, 11 GTA
Code Name—KARANDASH
Code Number—GHA507

Unit	Commander	Code No.
DC	LTC BOLDANOV, V.	
53 130mm Gun Bn	LTC GITALOV, I.	
64 130mm Gun Bn		LAC983
U/I 152mm G/H Bn	LTC KULESHOV, A.	GOK358
Tgt Acq Btry	CPT ANOSOV, L.	

e. 14 SCUD Surface-To-Surface Missile Brigade, 11 GTA
Code Name—VELIKIY OKTYABR
Code Number—OKF359

Unit	Commander	Code No.
CG	MG YAKOVLEV, Z.	
FDC	COL DRAGIN, V.	
1 SCUD SSM Bn		QGS204
1 SCUD SSM Btry		WNZ014
3 SCUD SSM Btry	CPT POLUKHIM, G.	
2 SCUD SSM Bn	LTC ANTROPOV, T.	BWT574

f. 23 Engineer Bdc, 11 GTA
Code Name—
Code Number—NOE299

Unit	Commander	Code No.
20 Engr Bn		MHA643
22 Engr Bn	LTC VOVKOB, M.	
25 Engr Bn		CLM013

B-7 46 Guards Tank Army.**Code Name—SAMOVAR****Code Number—**

Unit	Commander	Code No.
CG	A/GEN PETROV, M.	
FDC	C/GEN NIZOV, D.	
CofS	LTG GLAZKOV, F.	
72 GTD	LTG KORICHIN, V.	HRD530
79 GTD	LTG TSYGANIN, R.	RXU123
104 MRD	LTG ZHELENZNOV, I.	XCZ118
121 Pon Regt	COL ZAHAYEV, S.	AIM634
24G Arty Regt		KBL371
U/I SCUD SSM Bde	MG GLAZUNOV, A.	
31 Engr Bde	COL GOSHIY, T.	
27 MT Regt	COL BABIY, P.	
43 Intel Bn		EKF139
48 Med Regt		
CofR		SZV560

Unit History. Activated in _____ to control combat operations in the _____ region for which it was awarded the "GUARDS" designation. Prior to assignment to the NORTHERN FRONT area in _____, the 46th was augmented with the assignment of the 104th Motorized Rifle Division. An assigned major element, the 9th Guards Medium Tank Division, which was organic in the Homeland, has not been identified in the area of operations or the Homeland and is assumed to be unlocated.

a. 72 Guards Medium Tank Division, 46 GTA.**Code Name—TEPLAYA VESNA****Code Number—HRD530**

Unit	Commander	Code No.
CG	LTG KORICHIN, V.	
FDC	MG GOROSHKO, M.	
HQ Elm	CPT AZHAYEV, M.	
U/I GMTR	COL ARKHOVSKIY, B.	TMQ797
103 GMTR		MDG800
106 GMTR	COL VOSOBOYNIK, P.	UOE936
55 GMRR	COL KATRICH, F.	

Unit	Commander	Code No.
89 Arty Regt		
65 122mm How Bn	LTC MELESHCHENKO, B.	
136 122mm How Bn		
165 122mm How Bn		EBI741
U/I Recon Bn	LTC AVERBAKH, P.	
U/I Engr Bn		EPI552
U/I Sig Bn		YBK903
U/I Cml Bn	LTC LUCHKO, C.	
U/I MT Bn		PRY941
U/I Maint Bn		FXQ600
CofR	COL ERENBURG, V.	VIA317

Unit History. Date of activation is unknown. Organized by expanding the 72d Heavy Tank Regiment into a division-sized unit in _____. After a short training period the 72d was assigned to the 46th Tank Army for combat operations in the _____ region.

b. 79 Guards Medium Tank Division, 46 GTA.

Code Name—

Code Number—RXU123

Unit	Commander	Code No.
CG	LTG TSYGANIN, R.	
CofS	MG MIKUTSKIY, L.	
HQ Elm	CPT LAZAREV, D.	
94 GMTR		
98 GMTR	COL SLYUSAREV, P.	SHF441
U/I GMTR	COL TYAGUNIN, S.	
26 GMRR		ACB658
98 FROG Bn		
17 MRL Bn	LTC YARMCHENKO, K.	
43 Arty Regt		DCW616
12 122mm How Bn	LTC GOL'DSHTEYN, P.	
59 122mm How Bn		
U/I Recon Bn		GST228
U/I Engr Bn	LTC VALOV, Ya.	
U/I Sig Bn		NYZ192
U/I Cml Bn	LTC MASLOV, N.	

Unit	Commander	Code No.
U/I MT Bn		WTO810
40 Med Bn	LTC KUZOV, E.	LME251

Unit History. Date of activation is unknown, tentatively identified in combat operations in the _____ region. Subordination of the 79th was established when it acted as the advance party for the 46th Guards Tank Army movement into the NORTHERN FRONT area.

c. 104 Motorized Rifle Division, 46 GTA.

Code Name—

Code Number—XCZ118

Unit	Commander	Code No.
CG	LTG ZHELENZNOV, I.	
FDC	MG VLASOV, P.	
HQ Elm	CPT ASAFYEV, K.	
91 MRR		RDC010
114 MRR	COL AGISHEV, V.	XUM141
121 MRR	COL SULEYMANYAN, H.	
U/I MTR	COL MEDVEDEV, E.	CZV848
U/I Indep Tk Bn	LTC BRONSKY, R.	
85 AT Bn		
97 FROG Bn	LTC SHIGAYEV, P.	BYZ035
75 AA Regt		QHT173
64 Arty Regt		NXY023
30 122mm How Bn		
48 152mm How Bn	LTC MAKEYEV, N.	
U/I Recon Bn		BLD174
U/I Engr Bn	LTC KIKNADZE, I.	
U/I Sig Bn	LTC YAKOVLEV, G.	HAN746
105 Cml Bn	LTC TITOV, D.	
U/I MT Bn		KFU356

Unit History. Formed as a cadre division subordinate to the 98th Combined Arms Army in the Homeland in _____. Upon reassignment to the NORTHERN FRONT the 104th Motorized Rifle Division was fully equipped and manned.

d. 121 Pontoon Regiment, 46 GTA.

Code Name—

Code Number—AIM634

Unit	Commander	Code No.
CO	COL AZHAYEV, S.	
DC	LTC LUKMANOV, N.	
Svc Co	CPT KAZINETS, E.	MQH568
1 Brg Bn	LTC NOVITSKIY, B.	TOW524
2 Brg Bn		ZVP727

e. 24 Guards Artillery Regt, 46 GTA.

Code Name—SIL'NY DOZHID'

Code Number—KIBL371

Unit	Commander	Code No.
DC	LTC MAKAREVICH, O.	
CofS	LTC TURIKOV, P.	
U/I 130mm Gun Bn	LTC KHOMYLEV, L.	OER517
14 130mm Gun Bn	LTC URAZHTSEV, Ye.	UWX883
52 152mm G/H Bn		PIX359
Tgt Acq Btry	CPT ALIFANOV, G.	BKG476

f. U/I SCUD Surface-To-Surface Missile Brigade, 46 GTA.

Code Name—ROZOVAYA SHCHEKA

Code Number—

Unit	Commander	Code No.
CG	MG GLAZUNOV, A.	
FDC	COL MOVCHAN, I.	
1 SCUD SSM Bn	LTC SEMENOV, R.	IAB417
1 SCUD SSM Btry	CPT MAKAROV, B.	RYZ465
3 SCUD SSM Btry	CPT KARTSHOV, G.	XQP528
2 SCUD SSM Bn	LTC GRISHIN, Yu.	
1 SCUD SSM Btry	SrLT KRAVETS, A.	

g. Air Defense Elements, 46 GTA.

Unit	Commander	Code No.
U/I GVN-3 SAM Bn	COL BUDYONNY, D.	
1 GVN-3 SAM Bn	LTC BRESLAVSKIY, Ye.	

Unit	Commander	Code No.
2 GANEF SAM Bn	LTC BLAGODARNYY, L.	
U/I GAINFUL SAM Regt	COL STRIZHKOV, B.	

h. 31 Engineer Bde, 46 GTA.

Code Name—

Code Number—

Unit	Commander	Code No.
CO	COL GOSHIY, T.	
U/I Engr Bn	LTC STRIZHKOV, N.	
15 Engr Bn		
U/I Engr Bn (CONST)		HFY287

i. 43 Intelligence Battalion, 46 GTA.

Code Name—

Code Number—EKF139

Unit	Commander	Code No.
Intg Co		CBQ720
Cp Spt Elm	MAJ OVCHINNIKOV, F.	KLC421
Col Co		STH935

B-8. 51 Guards Tank Army.

Code Name—PIONERSKIY LAGER'

Code Number—WAX001

Unit	Commander	Code No.
CG	A/GEN PETOV, M.	
FDC	C/GEN STRUCHKOV, H.	
CofS	LTG GINZBURSKIY, M.	
H&S Elm		VPO720
3 GTD	LTG RYLOVTSEV, G.	CUI421
25 GTD	LTG ZAKHAROV, B.	SFA935
54 GMRD	LTG PIYAVSKIY, F.	
119 Pon Regt	COL YUKHNIN, M.	
44G Arty Regt		DIY959
U/I SCUD SSM Bde	MG DOBRYDEN, Yu.	AZN101
U/I Engr Bde		USO466

Unit	Commander	Code No.
17 MT Regt		BON188
56 Intel Bn	LTC IGNATYUK, P.	
U/I Sig Intcp Bn	LTC VECHERENKO, V.	KCR003
97 Psyop Co	CPT BLINOV, G.	
86 Med Regt		PCR831
CofR		VOS733

Unit History. Date of activation in the Homeland is unknown. Assigned to the NORTHERN FRONT in _____. Major unlocated units which were organic in the Homeland include the 83d Guards Medium Tank Division.

a. 3 Guards Medium Tank Division, 51 GTA.

Code Name—KHOLODNY YANVAR'

Code Number—CUI421

Unit	Commander	Code No.
CG	LTG RYLOVTSEV, G.	
CofS	MG SHARUPICH, M.	
HQ Elm		ERL168
75 GMTR	COL FRANGULOV, V.	GPH447
133 GMTR		
143 GMTR		
U/I GMRR	COL KAZANTSEV, I.	XNP894
24 MAINT Bn		ANR128
34 MRL Bn		
36G Arty Regt		WZE714
40 122mm How Bn	LTC MEL'NIKOV, A.	
114 122mm How Bn		
227 122mm How Bn	LTC OSEDCHENKO, V.	
47 Recon Bn		ABT081
U/I Engr Bn		QHV437
U/I Bn	LTC TITENKOV, N.	
80 Sig Bn		
CofR		PTB169

Unit History. Formerly the 3d Infantry Division; reorganized and designated the 3d Heavy Tank Division in _____. Subordinate tank units were equipped with T-62 medium tanks prior to movement from the Homeland.

b. 25 Guards Medium Tank Division, 51 GTA.**Code Name—****Code Number—SFA935**

Unit	Commander	Code No.
CG	LTG ZAKHAROV, B.	
FDC	MG SHAPOVALOV, G.	
HQ Elm		WKC369
U/I GMTR	COL NOVODVORETS, E.	
49 GMTR		
91 GMTR	COL KOSMATOVS, Ya.	NPV543
126 GMRR	COL KICHAYEV, A.	XWU901
35 AA Regt		VMP434
13G Arty Regt		SUA261
73 122mm How Bn		
218 122mm How Bn	LTC AVERBURG, G.	
42 Recon Bn	LTC KRUT'KO, S.	TLE452
23 Engr Bn		FYD465
U/I Sig Bn		ERB121
U/I Cml Bn		OAZ638
U/I MT Bn	LTC ILINKOV, M.	
CofR		YDG299

Unit History. Unit was organized by expanding the 25th Medium Tank Regiment in _____. Date of assignment of the 51st Guards Tank Army is unknown as the unit was only identified after arrival of its parent unit in the operational area.

c. 54 Guards Motorized Rifle Division, 51 GTA.**Code Name—SREDNYAYA SHKOLA****Code Number—**

Unit	Commander	Code No.
CG	LTG PIYAVSKIY, F.	
CofS	MG KHVILON, Ya.	
HQ Elm	CPT LEVSHIN, A.	
U/I GMRR	COL AKHTYRSKIY, B.	HIX637
110 GMRR		
136 GMRR	COL SHCHEPELEV, I.	SKH643
U/I GMTR	COL SKLYADNEV, T.	

Unit	Commander	Code No.
U/I Indep Tk Bn	LTC SENSKY L.	
59 AT Bn	LTC RADCHENKO, V.	
32 FROG Bn		
U/I Arty Regt		TEX510
51 122mm How Bn		
117 122mm How Bn		
23 152mm How Bn		YEE873
U/I Engr Bn	LTC MALYUTIN, A.	
U/I Cml Bn		YZG354
20 Recon Bn		
CofR	COL BAGUTSKIY, C.	

Unit History. Formed as a cadre division subordinate to the 76th Combined Arms Army in the Homeland in _____. After being fully manned and equipped, the 54th participated in extensive unit and individual training prior to assignment to the 51 Guards Tank Army in _____.

d. 119 Pontoon Regiment, 51 GTA.

Code Name—

Code Number—

Unit	Commander	Code No.
CO	COL YAKHNIN, M.	
DC	LTC ZADORSKIY, D.	
Svc Co	CPT BARONOV, C.	POQ815
Engr Co		UMD663
1 Brg Bn	LTC YAKHNENKO, F.	UWX572
2 Brg Bn	LTC KOSHLAKOV, N.	YZT285

e. 44 Guards Artillery Regt, 51 GTA.

Code Name—KHOROSHAYA NOVOST'

Code Number—DIY959

Unit	Commander	Code No.
DC	LTC SOLOV'YEV, Ya.	
CofS	LTC ALEKSEYEV, B.	
63 130mm Gun Bn		DVQ611
69 130mm Gun Bn		NGM968
22 152mm G/H Bn	LTC MARYUTIN, B.	RLF115
Tgt Acq Btry	CPT BUROV, E.	LFD036

f. U/I Army SCUD Surface-To-Surface Missile, Brigade, 51 GTA.

Code Name—

Code Number—AZN101

Unit	Commander	Code No.
CG	MG DOBRYDEN, Yu.	
FDC	COL NOLKOV, G.	
1 SCUD SSM Bn	LTC STEPAHOVICH, S.	LDI244
1 SCUD SSM Btry	CPT RYBIN, C.	HVO305
2 SCUD SSM Btry	CPT FOMENKO, S.	FAL657
2 SCUD SSM Bn		TOA567

g. U/I Army Engineer Brigade, 51 GTA.

Code Name—

Code Number—USO466

Unit	Commander	Code No.
DC	LTC CHIRVA, P.	
U/I Engr Bn	LTC STEPUSHIN, G.	
U/I Engr Bn	LTC KUTSENKO, B.	IXW712
U/I Engr Bn	LTC SYCHEV, M.	QNF903
U/I Engr Bn (CONST)		QPB319

h. 56 Intelligence Battalion, 51 GTA.

Code Name—

Code Number—

Unit	Commander	Code No.
CO	LTC IGNATYUK, P.	
3 Cp Spt Elm		CUI951
Intg Co	MAJ KLIMENKO, D.	
Col Co		HIX771

B-9 11 Tactical Air Army.

Code Name—

Code Number—TEA674

Unit	Commander	Code No.
CG	A/A/GEN KHUTIRNENKO, A.	
FDC	C/GEN VLASOV, I.	
H&S Sqdn		TLE334
3 Ftr-Bmr Div		AZN485
5 Ftr-Bmr Div		
21 Lt Bmr Regt	COL FREYGOT, S.	
2 Recon Regt		
4 Recon Regt		
13 Trans Sqdn		SKH292
81 Hel Regt		USO275
83 Hel Regt		DVQ271

B-10 7 Airborne Rifle Division

Code Name—ZELENAYA REKA

Code Number—

Unit	Commander	Code No.
CG	LTG YESIPOV, O.	
CofS	MG KRYKOV, G.	
7 Abn Rfl Regt	COL BULGAKOV, R.	RMV028
20 Abn Rfl Regt		
25 Abn Rfl Regt		MEC136
44 Recon Co	CPT SARYCHEV, M.	ERB062
U/I Engr Bn		WXK124
18 Sig Bn		KCR477

Unit History. Exact date of activation is unknown. Assigned to the NORTH-ERN FRONT after being equipped with the BMD in _____.

B-11 37 Artillery Division.

Code Name—

Code Number—GWF099

Unit	Commander	Code No.
CG	LTG SENIN, M.	
FDC	MG TALALIKHIN, B.	
4 130mm Gun Regt	COL SERGEYEV, D.	OQA319

Unit	Commander	Code No.
10 130mm Gun Regt	COL YELKIN, P.	
31 152mm G/H Regt	COL SHKIDCHENKO	UZH111
28 MT Bn		
U/I Sig Co		VOS667
12 Tgt Acq Bn	LTC IVOLGIN, Yu.	

Unit History. Date of activation and assignment are unknown. Unit was first identified in the European area after its assignment to the NORTHERN FRONT.

Section 2

B-12 Central FRONT

Code Name—DOROGAYA MASHINA

Code Number—

Unit	Commander	Code No.
CG	A/GEN ZGERSKIY, M.	
FDC	A/GEN SKOROMNYY, I.	
CofS	C/GEN LAVRINENKO, A.	
H&S Elm		FAL766
2 CAA	A/GEN NASTECHIK, U.	LFD812
14 CAA	A/GEN DENISENKO, B.	
23 CAA	A/GEN BREISACH, F.	
20 TKA	A/GEN ABICH, R.	NPV338
15 TAC Air Army	A/GEN BELOUSOV, H.	WUA688
14 Abn Rfl Div	LTG SIRPINSKIY, B.	HPR648
10 Arty Div	LTG MATVEYEV, D.	TMN190
32 SCUD SSM Bde		GWX861
5 SCALEBOARD SSM Bde	MG GORBUNOV, R.	
13 SAM Bde (GANEF)		EPH193
5 SAM Regt (GAINFUL)		CLX491
49 Engr Bde	COL CHEKANOV, Ya.	
16 Engr Bn	LTC TARUTIN, N.	
19 Engr Bn	LTC ROGACH, M.	
21 Engr Bn	LTC ORLOV, E.	
U/I CML Bde		BTO574
16 Sig Intcp Regt	COL SURKIN, S.	NFW014
10 Rdo Intcp Bn		UIH973

Unit	Commander	Code No.
14 Rdr Intcp Bn		IXF882
21 MT Bde		LEQ477
U/I Intel Regt	COL KHOLOPOV	
53 Med Bde		ZNY354
16 REC Bn	LTC KUSTENKO, A.	
U/I Psyop Bn		KHU067
CofR		SOT995

B-13 2 Combined Arms Army

Code Name—

Code Number—LFD812

Unit	Commander	Code No.
CG	A/GEN NASTECHIK, U.	
FDC	C/GEN SMERTIN, V.	
44 MRD	LTG DOLGIYER, N.	
56 MRD	LTG KRAVCHUK, A.	VQK665
U/I MRD	LTG MANGUSHEV, I.	MYS151
47 TKD		ECB865
114 Pon Regt	COL IL'IN, B.	
19 Arty Regt	COL SAGUNOV, V.	YZG020
48 SCUD SSM Bde		RBL397
15 Engr Bde	COL LEVITAN, A.	
26 Engr Bn	LTC DUTCHAK, E.	
8 Engr Bn	LTC ANASHKIN, N.	
7 MT Regt		CRZ276
62 Intel Bn	LTC KARPETS, R.	
U/I Sig Intcp Bn	LTC BAYUSOV, D.	
73 Cml Bn		OSD528
CofR		ALV334

a. 44 Motorized Rifle Division, 2 CAA.

Code Name—ZHELTY DOM

Code Number—

Unit	Commander	Code No.
CG	LTG DOLGIYER, N.	
CofS	MG LOBOV, H.	
HQ Elm		FDM303

Unit	Commander	Code No.
67 MRR		PVI491
U/I MRR	COL SEKERIN, D.	UAS349
80 MRR		
145 MTR		
U/I Indep Tk Bn		
22 Arty Regt		DTS612
17 122mm How Bn	LTC BOYKO, E.	
193 122mm How Bn	LTC DRYAGIN, V.	
51 Recon Bn		MNH035
8 Engr Bn	LTC BURTSEV, I.	
U/I Sig Bn		WXA181
U/I Cml Bn	LTC BUYANOV, P.	
U/I MT Bn	LTC LEVIN, B	
16 Maint Bn		
CofR	COL TITKOV, A.	

(1) 67 Motorized Rifle Regiment, 44 MRD, 2 CAA.**Code Name—****Code Number—PVI491**

Unit	Commander	Code No.
DC	LTC GLUKHOVSKI, B.	
HQ Elm		TOU472
Recon Co	CPT BETIKHER, Ya.	
Engr Co		GPB474
1 Mtr Rfl Bn	LTC SMIRNOV, V.	FWZ488
3 Mtr Rfl Bn	LTC BUTURLIN, S.	
Mdm Tk Bn		IHE559
ATGM Btry	CPT GOSTEV, C.	
AA Btry		XFV577

(2) 80 Motorized Rifle Regiment, 44 MRD, 2 CAA.**Code Name—PISMENNIY STOL****Code Number—**

Unit	Commander	Code No.
DC	LTC ARBUZOV, K.	
CofS	LTC LYKHMUS, B.	

Unit	Commander	Code No.
Recon Co	CPT BUSHUYEV, N.	
2 Mtr Rfl Bn		EOK000
3 Mtr Rfl Bn	LTC KUZNETSOV, M.	
Mdm Tk Bn	LTC GOR'KIY, G.	
AA Btry	CPT BUYALSKY, L.	

(3) 145 Medium Tank Regiment, 44 MRD, 2 CAA.

Code Name—
Code Number—

Unit	Commander	Code No.
DC	LTC PERESYPKIN, O.	
Recon Co		NYR803
2 Mdm Tk Bn		HUX417
3 Mdm Tk Bn	LTC SLADKEVICH, A.	
Trans Co		OTF157

b. 56 Motorized Rifle Division, 2 CAA.

Code Name—
Code Number—VQK665

Unit	Commander	Code No.
CG	LTG KRAVCHUK, A.	
CofS	MG MOCHALOV, Ya.	
U/I MRR		QKN854
69 MRR		YST610
78 MRR	COL BULYGIN, M.	
137 MTR	COL PENTIN, C.	CBW907
U/I Indep Tk Bn	LTC SMIRNOFF, B.	
82 AT Bn	LTC KUSTOV, E.	
38 MRL Bn	LTC GATSOLAYEV, D.	
95 FROG Bn	LTC LEONOV, I.	
47 Arty Regt		GKM584
135 122mm How Bn	LTC POLYAKOV, M.	
5 152mm How Bn	LTC SBOYEV, S.	
U/I Recon Bn	LTC ZHIDKOV, K.	
U/I Engr Bn		BLP774
U/I Sig Bn		KCD315

Unit	Commander	Code No.
98 CML Co		
Svc Elm		RZM557

(1) 69 Motorized Rifle Regiment, 56 MRD, 2 CAA.**Code Name—****Code Number—YST610**

Unit	Commander	Code No.
DC	LTC MAMEDOV, S.	
CofS	LTC GIGOR'YANTS, D.	
Recon Co		AEI826
1 Mtr Rfl Bn	LTC SLADKEVICH, V.	
2 Mtr Rfl Bn		SDL671

(2) 137 Medium Tank Regiment, 56 MRD, 2 CAA.**Code Name—****Code Number—CBW907**

Unit	Commander	Code No.
CO	COL PENTIN, C.	
Recon Co		LVO999
3 Mdm Tk Bn	LTC BABUKHIN, T.	
AA Btry	CPT TYAPKIN, N.	

c. U/I Motorized Rifle Division, 2 CAA.**Code Name—SINEYE MORYE****Code Number—MSY151**

Unit	Commander	Code No.
CG	LTG MANGUSHEV, I.	
U/I MRR		DMG390
U/I MRR	COL OMEL'CHUK, B.	
193 MRR	COL DOKUCHAYEV, B.	
127 MTR	COL YERMOLAYEV, I.	
U/I Indep Tk Bn		
U/I Recon Bn	LTC MIKHUNUSHEV, C.	
CofR	COL OZHESKO, K.	ASK257

d. 47 Medium Tank Division, 2 CAA.

Code Name—KRASIVAYA KARTINA

Code Number—

Unit	Commander	Code No.
FDC	MG BRELAVSKIY, B.	
CofS	MG ABROMCHUK, P.	
HQ Elm		RCL107
138 MTR		NHZ556
U/I MTR	COL KRUTINSHIY, A.	XAU231
180 MTR	COL KOGRUSHEV, B.	
183 MRR		OUY046
111 FROG Bn		
U/I Arty Regt		
29 122mm How Bn	LTC SVYATENKO, A.	
197 122mm How Bn	LTC BALYKO, Z.	
U/I Recon Bn	LTC GOLUBETS, I.	WZD082
U/I Cml Bn		HEM496
41 Maint Bn		

e. 19 Artillery Regiment, 2 CAA

Code Name—

Code Number—YZG020

Unit	Commander	Code No.
CO	COL SAGUNOV, V.	
H&S Btry		FDN797
31 130mm Gun Bn		QKF828
25 152mm G/H Bn		YRV050
Tgt Acq Btry	CPT SHISHOV, G.	

f. 48 SCUD Surface-To-Surface Missile Brigade, 2 CAA.

Code Name—

Code Number—RBL397

Unit	Commander	Code No.
FDC	COL BAUMAN, I.	
H&S Btry		UXP076
1 SCUD SSM Bn	LTC SEROV, M	TFW114

Unit	Commander	Code No.
2 SCUD SSM Bn	LTC KORNIYENKO, D.	
1 SCUD SSM Btry		KNO522
2 SCUD SSM Btry		STE698

B-14 14 Combined Arms Army.

Code Name—VYSOKAYA GORA

Code Number—

Unit	Commander	Code No.
CG	A/GEN DENISENKO, B.	
FDC	C/GEN KOMISSAROV, B.	
H&S Elm	LTC BORISOV, N.	
64 GMRD	LTG CHERNYSHEVSKIY, V.	
67 MRD	LTG CHUGURYAYEV, F.	
73 MRD	LTG PRIDENNIKOV, I.	BWR444
74 Pon Regt		GQS013
83 Pon Regt		LPI661
U/I Arty Regt	COL GORELIK, Z.	CDG144
18 SCUD SSM Bde		ZMX660
28 SAM Bde (GANEF)		
18 SAM Regt (GAINFUL)		
16 MT Regt		VOO553
42 Intel Bn	LTC LEVCHENKO, K.	
U/I Sig Intcp Bn		MGT408
CofR		SKV286

a. 64 Guards Motorized Rifle Division, 14 CAA.

Code Name—BOL'SHOY TEATR

Code Number—

Unit	Commander	Code No.
CG	LTG CHERNYSHEVSKIY, V.	
CofS	MG ALEKSEYEV, C.	
HQ Elm		CLS589
188 GMRR	COL TSVETKOV, V.	HZD913
197 GMRR		AUL552

Unit	Commander	Code No.
200 GMRR	COL GAYDUKOV, Ya.	
95 GMTR		UYI186
40 AT Bn	LTC AGISHEV, N.	
72 AA Regt		BAV026
27 Arty Regt	LTC KOBA, E.	
26 122mm How Bn		HDH315
215 122mm How Bn	LTC UTKIN, N.	
U/I Recon Bn	LTC BALASHOV, B.	
U/I Engr Bn		ZDM802
U/I Sig Bn		EMF905
U/I Cml Bn	LTC DREVIN, G.	
CofR	COL KHARLAMOV, L.	

b. 67 Motorized Rifle Division, 14 CAA.
Code Name—GORYACHIIY CHAY
Code Number—

Unit	Commander	Code No.
CG	LTG CHUGURYAYEV, F.	
HQ Elm	CPT THACHENKO, G.	
70 MRR		VNC427
94 MRR		KFG948
U/I MRR	COL GASKAROV, D.	RVH281
28 MTR	COL TIMOSHIN, V.	XPY021
U/I Indep Tk Bn		DGP122
46 AT Bn	LTC TOKUN, B.	
104 FROG Bn		DDD105
U/I Arty Regt		
47 152mm How Bn		
13 Recon Bn	LTC BABUSHKIN, P.	
5 Engr Bn		FWA307
U/I Sig Bn		NOT926
U/I MT Bn	LTC DIMITRENKO, C.	
CofR		TEN957

c 73 Motorized Rifle Division, 14 CAA.**Code Name—****Code Number—BWR444**

Unit	Commander	Code No.
CG	LTG PRIDENNIKOV, I.	
CofS	MG SHVAGIREV, B.	
HQ Elm		WRO211
U/I MRR		QSX395
181 MRR	COL KOBSEV, V.	
199 MRR		
129 MTR	COL ASLYUK, K.	
U/I Indep Tk Bn		XKC653
U/I Recon Bn	LTC VANIN, D.	
U/I Engr Bn		DGR465
U/I Cml Bn	LTC IGNATOV, V.	
U/I MT Bn		MXP616
U/I Med Bn		IHB781
12 Maint Bn	LTC VERBITSKIY, E.	
C of R	COL KRETOV, V.	

(1) 129 Medium Tank Regiment, 73 MRD, 14 CAA.**Code Name—SVOBODNOYE VREMYA****Code Number—**

Unit	Commander	Code No.
CO	COL ASLYUK, K.	
CofS	LTC DUBOV, V.	
Recon Co		LBE478
1 Mdm Tk Bn		OQZ195
3 Mdm Tk Bn	LTC VORBERTS, A.	
AA Btry		GTB551

(2) Division Artillery Elements, 73 MRD, 14 CAA.

Unit	Commander	Code No.
DC	LTC CHERKAS, O.	
102 Arty Regt		YCQ733
93 122mm How Bn	LTC DENISOV, L.	
174 122mm How Bn	LTC MYASNIKOV, I.	

Unit	Commander	Code No.
34 152MM How Bn	LTC ZHDANOV, H.	
U/I AT Bn		KVM269
83 FROG Bn	LTC AKSEN, B.	
1 FROG Btry		LSA887
2 FROG Btry	CPT MUKAN, A.	
27 MRL Bn	LTC EPERMANIS, Yu.	
U/I AA Regt		ZDS895

(3) Reconnaissance Battalion, 73 MRD, 14 CAA.

Code Name—

Code Number—

Unit	Commander	Code No.
CO	LTC VANIN, D.	
LRR Co	SrLT POLENOV, V.	
Amph Tk Co	CPT BASKAKOV, B.	

d. 74 Pontoon Regiment, 14 CAA.

Code Name—

Code Number—GQS013

Unit	Commander	Code No.
DC	LTC TITENKOV, V.	
CofS	LTC SHUMSKIY, G.	
Svc Co		ULT216
1 Brg Bn	LTC VASOL'YEV, Yu.	
2 Brg Bn	LTC LOBANOV, Z.	YIZ291
AA Btry	CPT ZHUKOV, C.	

e. 83 Pontoon Regiment, 14 CAA.

Code Name—DETSKIY SAD

Code Number—LPI661

Unit	Commander	Code No.
DC	LTC SHIPOV, E	
Svc Co	CPT BAGRAMYAN, K.	
1 Brg Bn	LTC KORGOD, V	
2 Brg Bn		AUE055

f. U/I Army Artillery Regiment, 14 CAA.**Code Name—****Code Number—CDG144**

Unit	Commander	Code No.
CO	COL GORELIK, Z.	
DC	LTC SHUL'GA, F.	
2 130mm Gun Bn		DMH359
U/I 152mm G/H Bn		MFN965

g. 18 SCUD Surface-To-Surface Missile Brigade, 14 CAA.**Code Name—****Code Number—ZMX660**

Unit	Commander	Code No.
FDC	COL PETROV, H.	
1 SCUD SSM Bn		NCU243
1 SCUD SSM Btry		FGD021
2 SCUD SSM Btry	CPT RULEV, A.	
2 SCUD SSM Bn	LTC PANIN, Ya.	VHF443
2 SCUD SSM Btry		PWY602

h. 42 Intelligence Battalion, 14 CAA.**Code Name—****Code Number—**

Unit	Commander	Code No.
CO	LTC LEVCHENKO, K.	
Intg Co		WAI845
CP Spt Elm		OTP232
Col Co		ROV185

B-15 23 Combined Arms Army.**Code Name—VESELAYA DEVUSHKA****Code Number—**

Unit	Commander	Code No.
CG	A/GEN BREISACH, F.	
CofS	LTG YELKIN, B.	
H&S Elm		IYC756
12 MRD	LTG DYBENKO, V.	
136 MRD	LTG KAZMIRCHUK, V.	GRQ866

Unit	Commander	Code No.
65 GTD		XPG955
89 Pon Regt	COL SOLOVYKH, E.	HBK129
39G Arty Regt		BEX223
9 SCUD SSM Bde		QZR317
U/I Engr Bde		TKB398
24 MT Regt		VMO634
U/I Intel Bn	LTC FATEYEV, D.	
U/I Sig Intcp Bn		ANW749
U/I Cml Bn		TMH811
33 Sig Regt	COL PUCHKOV, Ya.	DVV941
51 Psyop Co		FCC827
C of R		ZDC853

a. 12 Motorized Rifle Division, 23 CAA.
Code Name—SHASTLIVY RABOTNIK
Code Number—

Unit	Commander	Code No.
CG	LTG DYBENKO, V.	
FDC	MG KEKALO, V.	
5 MRR	COL DAVKETOV, C.	
8 MRR	COL NIKITIN, R.	EKO507
82 MRR		HXP925
81 MTR		
U/I Indep Tk Bn	LTC BAKHAREV, N.	
18 Recon Bn		NYS342
10 Engr Bn		UAY258
59 Med Bn	LTC SOLDATOV, D.	
23 MT Bn	LTC GUDZ', E.	
C of R	COL PARETSKIY, M.	

(1) 8 Motorized Rifle Regiment, 12 MRD 23 CAA
Code Name—
Code Number—EKO507

Unit	Commander	Code No.
CO	COL NIKITIN, R.	
CofS	LTC ZHUKOLIN, E.	

Unit	Commander	Code No.
Recon Co		DIA176
1 Mtr Rfl Bn		FGL094
3 Mtr Rfl Bn	LTC PHILIPENKO, L.	
Mdm Tk Bn	LTC YERSHOV, S.	
How Btry		YOF273

(2) 81 Medium Tank Regiment, 12 MRD, 23 CAA.

Code Name—

Code Number—

Unit	Commander	Code No.
DC	LTC GADZHIYEV, E.	
Recon Co		IEQ961
1 Mdm Tk Bn	LTC SAVKIN, N.	PFE232
AA Btry	CPT BRAN'KOV, S.	

(3) Division Artillery Elements, 12 MRD, 23 CAA.

Unit	Commander	Code No.
CRTA	COL PIVOVAR, A.	
14 Arty Regt	COL SHANSKIY, O.	
90 122mm How Bn	LTC SEROV, H.	OPG242
133 122mm How Bn		VHN393
27 152mm How Bn		BTP653
Tgt Acq Btry	CPT VORONOV, H.	
69 AT Bn		WTR907
68 FROG Bn		CZT706
1 FROG Btry		QVI924
2 FROG Btry		GBD085
45 MRL Bn	LTC KITAYEV, N.	

(4) 18 Reconnaissance Battalion, 12 MRD, 23 CAA.

Code Name—

Code Number—NYS342

Unit	Commander	Code No.
DC	MAJ BOGDANOV, N.	
Amph Tk Co	CPT NETSHOV, Yu.	
LRR Co	CPT PIRIYEV, P.	

(5) 10 Engineer Battalion, 12 MRD, 23 CAA.
Code Name—
Code Number—UAY258

Unit	Commander	Code No.
CofS	MAJ REMIZOV, V.	
Pon Co	CPT KAZ'MIN, C.	
Amph Co	SrLT TROFIMUK, O.	

b. 136 Motorized Rifle Division, 23 CAA.
Code Name—KOMSOMOLETS
Code Number—GRQ866

Unit	Commander	Code No.
CG	LTG KAZMIRCHUK, V.	
FDC	MG ZGERSKIY, C.	
202 MRR		
204 MRR		
U/I MRR		KLX628
166 MTR		XRU400
U/I Indep Tk Bn		CQL488
107 FROG Bn	LTC MISHIN, M.	
90 AA Regt		GNE260
52 Arty Regt		HXO610
43 152mm How Bn	LTAC KHOBOTOV, A.	
54 Recon Bn	LTC YAGOFAROV, R.	
U/I Engr Bn	LTC LIPATOV, F.	RWB196
U/I MT Bn	LTC STAT'YAN, C.	
C of R		BCV293

c. 65 Guards Medium Tank Division, 23 CAA.
Code Name—
Code Number—XPG955

Unit	Commander	Code No.
FDC	MG DZERZHINSKIY, I.	
CofS	MG PAVLOV, B.	
128 GMTR		
147 GMTR	COL KANUPER, E.	LSM834
154 GMTR	COL FOKIN, C.	

Unit	Commander	Code No.
152 GMRR		
22 Recon Bn		NWI071
40 Engr Bn		UKE790
U/I Cml Bn	LTC YULAYEV, H.	
C of R		MHZ171

(1) 147 Guards Medium Tank Regiment, 65 GTD, 23 CAA.

Code Name—

Code Number—LSM834

Unit	Commander	Code No.
CO	COL KANUPER, E.	
DC	LTC VAENKOV, B.	
Recon Co	CPT BABENKO, D.	
2 Mdm Tk Bn		DCL974
3 Mdm Tk Bn	LTC ZOZULYA, M	KOC890
AA Btry		XPS747

(2) Division Artillery Elements, 65 GTD, 23 CAA.

Unit	Commander	Code No.
CRTA	COL MOCHENKOV, G.	
U/I Regt		YSV948
15 122mm How Bn	LTC TSUSHKO, K.	
116 122mm How Bn	LTC ZALOMIN, L.	AYM042
U/I FROG Bn	LTC GROMOV, B.	IAR978
1 FROG Btry		GLU 253
2 FROG Btry		QFG825
U/I AA Regt	COL UTKIS, D.	

(3) 22 Reconnaissance Battalion, 65 GTD, 23 CAA.

Code Name—

Code Number—NWI071

Unit	Commander	Code No.
DC	MAJ DIDENKO, C.	
Amph Tk Co	CPT BAGRITSKY, R.	
LRR Co	CPT GRUNTSOV, G.	

d. 89 Pontoon Regiment, 23 CAA.

Code Name—

Code Number—HBK129

Unit	Commander	Code No.
CO	COL SOLOVYKH, E.	
CofS	LTC TOFAN, M.	
Svc Co		EQX161
Engr Co	CPT TSIULA, N.	
1 Brg Bn		FEW462
2 Brg Bn	LTC MOSTOVYY, I.	

e. 39 Guards Artillery Regiment, 23 CAA.

Code Name—

Code Number—BEX223

Unit	Commander	Code No.
DC	LTC GAYDAR, E.	
11 130mm Gun Bn		PGB830
U/I 130mm Gun Bn	LTC BUDA, V.	
13 152mm G/H Bn	LTC VERSHININ, L.	

f. 9 SCUD Surface-To-Surface Missile Brigade, 23 CAA.

Code Name—

Code Number—QZR317

Unit	Commander	Code No.
FDC	COL TSINGLER, A.	
1 SCUD SSM Bn	LTC MILEKO, C.	
1 SCUD SSM Btry		HNT896
3 SCUD SSM Btry		TRH982
2 SCUD SSM Bn	LTC SAYAYDUK, Ya.	

g. Air Defense Elements, 23 CAA.

Unit	Commander	Code No.
26 GANEF SAM Bde	COL BRITSKE, W.	
11 GAINFUL SAM Regt	COL OKSIN, L.	ZTO202

h. U/I Army Engineer Brigade, 23 CAA.

Code Name—
Code Number—TKB398

Unit	Commander	Code No.
DC	LTC KARELIN, P.	
U/I Engr Bn		BDQ746
U/I Engr Bn		LXD578

i. U/I Intelligence Battalion, 23 CAA.

Code Name—
Code Number—

Unit	Commander	Code No.
CO	LTC FATEYEV, D.	
CofS	MAJ KUZ'MIN, R.	
CP Spt Elm		RUK661
Col Co		WBN629
Intg Co		CVA943

B-16. 20 Tank Army.

Code Name—
Code Number—NPV338

Unit	Commander	Code No.
CG	A/GEN ABICH, R.	
FDC	C/GEN BAKHMETEFF, C.	
21 GTD	LTG PETREYEV, G.	
24 TKD	LTG SHCHADOV, A.	SMF084
30 GMRD	LTG BOCHAROV, A.	ZYN982
6 Arty Regt	COL PROSKUR, R.	
U/I SCUD SSM Bde		WIP515
6 SAM Regt (GAINFUL)		ACC903
U/I Engr Bde		KED310
10 MT Regt		HZM394
37 Intel Bn	LTC ZIMANKOV, C.	CLW909
95 Cml Bn		OCT280
58 Sig Regt		
92 Pon Regt	COL KOSTYUKOV, N.	

a. 21 Guards Medium Tank Division, 20 TKA.
Code Name—GLUBOKOYE OZERO
Code Number—

Unit	Commander	Code No.
CG	LTG PETREYEV, G.	
CofS	MG ALFONIN, A.	
HQ Elm		SVE488
23 GMTR		
44 GMTR	COL ZAYTSEV, S.	YMQ098
U/I GMTR	COL BEKHTEREV, L.	ARX146
151 GMRR	COL DYBENKO, V.	
U/I Recon Bn		LUH753
U/I Engr Bn		FGI314
U/I Sig Bn	LTC RUSSOV, H.	
62 MT Bn		QXF789
93 Cml Bn		ERO767
C of R	COL BAKHURIN, T.	

(1) Division Artillery Elements, 21 GTD, 20 TKA.

Unit	Commander	Code No.
CRTA	COL TUROVTSEV, D.	
2 Arty Regt	COL KUSHCH, V.	
38 122mm How Bn		EWS278
130 122mm How Bn		GBY039
U/I FROG Bn	LTC KOZHIN, D.	
2 FROG Btry		NTR 493
36 MRL Bn		RHB578

(2) U/I Reconnaissance Battalion, 21 GTD, 20 TKA.
Code Name—
Code Number—LUH753

Unit	Commander	Code No.
DC	MAJ KURKOV, K.	
Mtr Recon Co	CPT DENISOV, E.	
LRR Co	CPT LYSENKO, L.	

b. 24 Medium Tank Division, 20 TKA.**Code Name—PERSIDSKIY KOVER****Code Number—SMF084**

Unit	Commander	Code No.
CG	LTG SHCHADOV, A.	
CofS	MG POLYARNYY, C.	
HQ Elm		TOK255
53 MTR	COL BEZNOS, C.	
134 MTR		IPU124
136 MTR	COL BOLDOV, V.	
155 MRR	COL KORABLEV, N.	
15 Recon Bn		XAB471
U/I Engr Bn		XDA820
U/I Sig Bn		UKO327
U/I Cml Bn		BNC820
11 MT Bn		FGH861
C of R		VAL370

(1) Division Artillery Elements, 24 TKD, 20 TKA.

Unit	Commander	Code No.
CRTA	COL POTAPOV, B.	
21G Arty Regt		MFV435
128 122mm How Bn		YNR715
146 122mm How Bn	LTC MAKAROV, B.	
169 122mm How Bn	LTC GEMENOV, I.	
Tgt Acq Btry	CPT VINOKUOV, G.	
5 FROG Bn		IPT579
23 MRL Bn	LTC KONEV, H.	
26 AA Regt		HRS354

(2) 15 Reconnaissance Battalion, 24 TKD, 20 TKA.**Code Name—****Code Number—XAB471**

Unit	Commander	Code No.
DC	MAJ VERSHININ, Ya.	
Mtr Recon Co	CPT NOVICHKOV, P.	
LRR Co	SrLT MELIKHOV, C.	

c. 30 Guards Motorized Rifle Division, 20 TKA.
Code Name—PRAVAYA RUKA
Code Number—ZYN982

Unit	Commander	Code No.
CG	LTG BOCHAROV, A.	
CofS	MG BAKUNIN, N.	
HQ Elm		EDK295
156 GMRR	COL SKAYDUROV, L.	
U/I GMRR	COL BLIZNYUK, M.	
161 GMRR		LWA859
U/I GMTR	COL KULIKOV, O.	CTE807
U/I Indep Tk Bn	LTC RUDOLPHSKAYA, A.	
29 Recon Bn		VEL397
U/I Engr Bn		MQC652
U/I Sig Bn	LTC DOLGOV, C.	
61 Med Bn	LTC ARTEMKIN, I.	
C of R		RXD262

(1) 156 Guards Motorized Rifle Regiment, 30 GMRD, 20 TKA.
Code Name—PODBORODOK
Code Number—

Unit	Commander	Code No.
CO	COL SKAYDUROV, L.	
DC	LTC KHOLODNOV, M.	
2 Mtr Rfl Bn		UHO188
Mdm Tk Bn		GIX334
How Btry	CPT BELOPOLSKY, K.	

(2) Division Artillery Elements, 30 GMRD, 20 TKA.

Unit	Commander	Code No.
CofS	LTC MALYY, C.	
U/I Arty Regt	COL STARCHENKO, B.	
6 122mm How Bn	LTC ZAPOROZHETS, V.	
79 122mm How Bn	LTC SHAPAREV, A.	
188 152mm How Bn	LTC BELYAYEV, V.	
Tgt Acq Btry		XFM413
10 FROG Bn		WSH601

Unit	Commander	Code No.
84 AT Bn	LTC TIKHONOV, C.	
U/I AA Regt	COL TARGONSKIY, R.	

d. 92 Pontoon Regiment, 20 TKA.**Code Name—ZRITEL'NY ZAL****Code Number—**

Unit	Commander	Code No.
CO	COL KOSTYUKOV, N.	
Svc Co		BYF393
1 Brg Bn	LTC KOVALEV, I.	
2 Brg Bn	LTC BALANDIN, A.	
AA Btry		TRS573

e. 6 Artillery Regiment, 20 TKA.**Code Name—BUBLIKI****Code Number—**

Unit	Commander	Code No.
CO	COL PROSKUR, R.	
51 130mm Gun Bn	LTC ZORIN, E.	
72 130mm Gun Bn	LTC OL'KHIN, C.	
45 152mm G/H Bn		HBV694

f. U/I Army SCUD Surface-To-Surface Missile Brigade, 20 TKA.**Code Name—****Code Number—WIP515**

Unit	Commander	Code No.
FDC	COL MIRONOV, F.	
1 SCUD SSM Bn	LTC NIKOLAYEV, H.	OKM855
2 SCUD SSM Bn	LTC VOLYNSKIY, N.	

B-17. 15 Tactical Air Army.**Code Name—****Code Number—WUA688**

Unit	Commander	Code No.
CG	A/A/GEN BELOUSOV, H.	
FDC	C/GEN BELOKUZOV, P.	
H&S Sqdn		PUB672

Unit	Commander	Code No.
6 Ftr-Bmr Div		QZ1828
8 Ftr-Bmr Div	LTG DMITRIYEV, S.	
23 Lt Bmr Regt		
10 Recon Regt		
11 Recon Regt		
15 Trans Sqdn	LTC BAGIROV, C.	
21 Hel Regt		
76 Hel Regt		DAV931

B-18. 14 Airborne Rifle Division.

Code Name—VINOGRADNY SOK

Code Number—HPR648

Unit	Commander	Code No.
CG	LTG SIRPINSKIY, B.	
24 Abn Rfl Regt		
37 Abn Rfl Regt	COL BOTIN, D.	
50 Abn Rfl Regt	COL BELETSKIY, P.	
12 Recon Co	CPT GURZHIY, K.	
U/I Engr Bn		NCG304

Unit History. Activated in _____ as an infantry division and redesignated and equipped in present form in _____. Assigned to the CENTRAL FRONT after being equipped with the BMD.

B-19. 10 Artillery Division.

Code Name—BANNY LISTOK

Code Number—TMN190

Unit	Commander	Code No.
CG	LTG MATVEYEV, D.	
21 130mm Gun Regt	LTC ANIKANOV, V.	
27G 130mm Gun Regt		GVM130
30 152mm G/H Regt	LTC GUBIN, V.	
26 MT Bn	LTC KOSOV, K.	
13 Tgt Acq Bn		CDC963
U/I Sig Co		NLK417

Unit History. Date of activation is unknown; assigned to the CENTRAL FRONT upon activation of its parent unit. An additional artillery regiment which is still unidentified joined the organization in _____.

Section 3

B-20. Southern FRONT.

Code Name—MOCHALKA

Code Number—PBC024

Unit	Commander	Code No.
CG	A/GEN KOMAROV, A.	
CofS	C/GEN BALMASHEV, R.	
4 CAA	A/GEN BARATYNSKY, P.	DMT289
12 CAA	A/GEN ANOKHIN, B.	
24 CAA		MSY789
8 GTA		WXM735
17 TAC Air Army	A/GEN BORETSKY, P.	
4 Abn Rfl Div		TAN817
16 Arty Div		GFO320
67 SCUD SSM Bde	MG OSADCHIY, Ya.	
19 SCALEBOARD SSM Bde	MG PERSHAY, F.	
4 SAM Bde (GANEF)		CTK212
U/I Engr Bde	COL VASIL'KOV, I.	
20 Cml Bde		QTZ388
U/I Intcp Regt		XYF872
20 MT Bde		HND094
64 Med Bde		IGE349
3 Psyop Bn		FPG608
17 Sig Bde	COL MERKUSHOV, R.	GLH919
C of R	MG KORNEV, L.	EOU262

B-21. 4 Combined Arms Army.

Code Name—POLOTENTSE

Code Number—DMT289

Unit	Commander	Code No.
CG	A/GEN BARATYNSKY, P.	
CofS	LTG CHERKASOV, V.	
32 MRD		
36 GMRD	LTG STRELKOV, K.	
41 GMRD	LTG ANDREYEV, B.	
38 GTD		SUP556

Unit	Commander	Code No.
122 Pon Regt		
U/I Arty Regt	COL KARAVAYTSEV, C.	BDS102
48G Arty Regt		YZV161
U/I SCUD SSM Bde	MG YASHCHUK, M.	RCI096
U/I MT Regt		KHQ520
57 Intel Bn	LTC KOL'TSOV, B.	
U/I Sig Intcp Bn	LTC BARANSKY, E.	
97 Cml Bn		ZVH823
82 Med Regt	LTC PAUTOV, E.	
C of R		OIB226

a. 32 Motorized Rifle Division, 4 CAA.

Code Name—PYATILETKA

Code Number—

Unit	Commander	Code No.
FDC	MG TRISHANKOV, N.	
HQ Elm		CKR629
39 MRR	COL MERKOYSKIY, I.	
44 MRR		VWX501
52 MRR	COL PRASOLOV, A.	
181 MTR		
U/I Indep Tk Bn		
36 Recon Bn		NKC825
15 Engr Bn	LTC BELOZEROV, N.	
U/I MT Bn		DTU147
CofR		PCG773

(1) 52 Motorized Rifle Regiment, 32 MRD, 4 CAA.

Code Name—POMIDOR

Code Number—

Unit	Commander	Code No.
CO	COL PRASOLOV, A.	
Recon Co	CPT VEDUTENKO, B.	
1 Mtr Rfl Bn		MYK568
3 Mtr Rfl Bn	LTC KUZOVLEV, H.	
Morp Tk Bn		WMZ116
How Btry	CPT KUDRYAKOV, L.	

(2) Division Artillery Elements, 32 MRD, 4 CAA.

Unit	Commander	Code No.
CRTA	COL SHISHKIN, R.	
93 Arty Regt		TNR833
181 122mm How Bn	LTC BERDYAYEV, W.	
37 122mm How Bn	LTC KOZHIN, G.	
U/I 152mm How Bn		GOE379
19 FROG Bn		EUA860
U/I AT Bn	LTC BILEYSHIN, P.	
29 AA Regt		QZP359
11 MRL Bn	LTC ZAV'YALOV, A.	

b. 36 Guards Motorized Rifle Division, 4 CAA.**Code Name—SHPUL'NY KLAPAN****Code Number—**

Unit	Commander	Code No.
CG	LTG STRELKOV, K.	
HHC		XFV157
33 GMRR		HDI256
41 GMRR		
132 GMRR	COL TSVETKOV, R.	
85 GMTR	COL BLINOV, C.	
U/I Indep Tk Bn	LTC BELAYAEV, K.	
U/I Recon Bn		IEN637
U/I Engr Bn	LTC KOTOV, M.	
U/I MT Bn	LTC URBANUS, V.	
83 Med Bn	LTC LUKIN, A.	
CofR		FGB341

(1) 185 Guards Medium Tank Regiment, 36 GMRD, 4 CAA.**Code Name—KIRILITSA****Code Number—**

Unit	Commander	Code No.
CO	COL BLINOV, C.	
Recon Co	SrLT KUPAVA, N.	
1 Mdm Tk Bn	LTC ABDULAYEV, P.	
3 Mdm Tk Bn		SPQ863
AA Btry	CPT GRIBANOV, F.	

(2) Division Artillery Elements, 36 GMRD, 4 CAA.

Unit	Commander	Code No.
CRTA	COL TARASENKO, H.	
10G Arty Regt		YVW474
88 122mm How Bn	LTC PYSHKIN, V.	
44 152mm How Bn		RID568
U/I AT Bn	LTC KUREPKO, O.	
U/I FROG Bn	LTC KAMYSHANOV, I.	
U/I MRL Bn		BSM740

c. 41 Guards Motorized Rifle Division, 4 CAA

Code Name—SHOKOLAD

Code Number—

Unit	Commander	Code No.
CG	LTG ANDREYEV, B.	
CofS	MG KOMAROV, C.	
127 GMRR	COL DERYABIN, Ya.	
133 GMRR		
148 GMRR		
199 GMTR	COL BORISYUK, G.	KQF167
U/I Indep Tk Bn	LTC PRIBYTKOV, G.	
U/I Recon Bn		ZHX819
U/I Engr Bn	LTC KUT'INOV, F.	
CofR		OBL755

(1) 127 Guards Motorized Rifle Regiment, 41 GMRD, 4 CAA.

Code Name—SERY VOLK

Code Number—

Unit	Commander	Code No.
CO	COL DERYABIN, Ya.	
Recon Co	CPT PODIL'KO, R.	
1 Mtr Rfl Bn	LTC SHEKHOVTSEV, G.	
3 Mtr Rfl Bn		CRH233
Mdm Tk Bn	LTC BELYSHEV, I.	
How Btry	CPT DAVYDOV, V.	

(2) 199 Guards Medium Tank Regiment, 41 GMRD, 4 CAA.**Code Name—****Code Number—KQF167**

Unit	Commander	Code No.
CO	COL BORISYUK, G.	
Recon Co	CPT POPOV, M.	
1 Mdm Tk Bn		VXY918
3 Mdm Tk Bn	LTC KUCHEROV, H.	
AA Btry	SrLT BASHIROV, A.	

(3) Division Artillery Elements, 41 GMRD, 4 CAA.

Unit	Commander	Code No.
CofS	LTC BAZYLEV, E.	
U/I Arty Regt	COL KOSTIN, M.	
76 122mm How Bn	LTC BOTIN, F.	
139 122mm How Bn	LTC DUKACHEV, C.	
9 152mm How Bn		RKC031
4 FROG Bn	LTC SIMIKYAN, P.	
34 AA Regt		EMG053

d. 38 Guards Medium Tank Division, 4 CAA**Code Name—****Code Number—SUP556**

Unit	Commander	Code No.
CofS	MG SHUMILOV, V.	
182 GMTR		
186 GMTR		
190 GMTR	COL BOCHAROV, C.	
165 GMRR	COL SKLYANSKIY, V.	
U/I Recon Bn		SEV094
U/I Engr Bn	LTC SEREGIN, D.	
5 Maint Bn		
C of R	COL SEMENOV, S.	

(1) 182 Guards Medium Tank Regiment, 38 GTD, 4 CAA.
Code Name—MORSKOY FLOT
Code Number—

Unit	Commander	Code No.
CofS	LTC NOVIKOV, F.	
Recon Co		TCG587
1 Mdm Tk Bn		KTU544
3 Mdm Tk bn	LTC MEL'NIK, S.	

(2) 190 Guards Medium Tank Regiment, 38 GTD, 4 CAA.
Code Name—VKUSNOYE YABLOKO
Code Number—

Unit	Commander	Code No.
CO	COL BOCHAROV, C.	
Engr Co	SrLT PAL'TSEV, E.	PYK718
2 Mdm Tk Bn		AMZ198
AA Btry	CPT SLOPODSKOY, B.	

(3) Division Artillery Elements, 38 GTD, 4 CAA.

Unit	Commander	Code No.
CRTA	COL KONRAT'YEV, I.	
U/I Arty Regt	COL GORODNIY, F.	
3 122mm How Bn	LTC BALABAYKIN, R.	
71 122mm How Bn		ENR582
6 FROG Bn		WOE265
U/I MRL Bn	LTC BORATYNSKY, E.	
73 AA Regt		

e. 122 Pontoon Regiment, 4 CAA.
Code Name—GUBNAYA POMADA
Code Number—

Unit	Commander	Code No.
CofS	LTC BELIKOV, V.	
Engr Co	CPT GOLOVKO, A.	
1 Brg Bn	LTC MISHIN, E.	LUA694
2 Brg Bn	LTC BEZGOGKOV, B.	

f. U/I Artillery Regiment, 4 CAA.**Code Name—OSTRAYA BRITVA****Code Number—BDS102**

Unit	Commander	Code No.
CO	COL KARAVAYTSEV, C.	
16 130mm Gun Bn	LTC KOVSHAR, O.	
42 130mm Gun Bn		CZP146
U/I 152mm G/H Bn	LTC KORENEV, M.	

g. 48 Guards Artillery Regiment, 4 CAA.**Code Name—****Code Number—YZV161**

Unit	Commander	Code No.
CofS	LTC SAABOLOV, I.	
50 130mm Gun Bn	LTC MILEKO, B.	
10 152mm G/H Bn		DFV758
Tgt Acq Btry	CPT BUDNOV, K.	

h. U/I SCUD Surface-To-Surface Missile Brigade, 4 CAA.**Code Name—AVTORUCHKA****Code Number—RCI096**

Unit	Commander	Code No.
CG	MG YASHCHUK, M.	
1 SCUD SSM Bn	LTC KOLESNIKOV, B.	
1 SCUD SSM Btry		QDI300
3 SCUD SSM Btry		XEN697
2 SCUD SSM Bn	LTC YURCHENKO, E.	

i. Air Defense Elements, 4 CAA.

Unit	Commander	Code No.
19 GANEF SAM Bde	COL RASHKIN, P.	
36 GAINFUL SAM Regt	COL KOTOVICH, C.	

j. 57 Intelligence Battalion, 4 CAA.**Code Name—****Code Number—**

Unit	Commander	Code No.
CO	LTC KOL'TSOV, B.	
Intg Co	CPT SHENBEROV, I.	

Unit	Commander	Code No.
CP Spt Elm		HPQ864
Col Co	CPT ZAYCHENKOV, M.	

B-22 12 Combined Arms Army.
Code Name—CHITATELSKIY BILET
Code Number—

Unit	Commander	Code No.
CG	A/GEN ANOKHIN, B.	
CofS	LTG DUNAYEV, D.	
34 MRD	LTG ZAGORSKIY, H.	
39 MRD		SID357
58 GTD	LTG MAL'TSEV, A.	YSM963
139 Pon Regt	COL ANTONENKO, N.	
30G Arty Regt	COL BELOV, C.	NQF568
3 SCUD SSM Bde		BWS644
25 MT Regt		VAO903
40 Intel Bn	LTC KHRAPONOV, F.	
U/I Sig Intcp Bn	LTC GRIGOR'YEV, B.	
81 Cml Bn		ZBE866
73 Med Rgt	COL TRAVKIN, E.	IHX650
CofR	MG IL'INOV, A.	

a. 34 Motorized Rifle Division, 12 CAA
Code Name—ZAGRANITSA
Code Number—

Unit	Commander	Code No.
CG	LTG ZAGORSKIY, H.	
HQ Elm		GRH193
62 MRR		
73 MRR		OLT479
86 MRR	COL PELIKHOV, I.	
U/I MTR	COL TITKOV, I.	
U/I Indep Tk Bn	LTC BATYUSHKOV, G.	

Unit	Commander	Code No.
U/I Recon Bn		UXY732
U/I Engr Bn	LTC SHEVYREV, G.	
U/I Med bn	LTC GARNOV, W.	
C of R		NLW066

(1) 86 Motorized Rifle Regiment, 34 MRD, 12 CAA.**Code Name—BOLSHAYA PTITSA****Code Number—**

Unit	Commander	Code No.
CO	COL PELIKHOV, I.	
Recon Co	CPT MEL'NIKOV, C.	
2 Mtr Rfl Bn	LTC LALETIN, B.	
Mdm Tk Bn		KFD686
How Btry		CAL215

(2) Division Artillery Elements, 34 MRD, 12 CAA.

Unit	Commander	Code No.
CRTA	COL REVEGUK, P.	
108G Arty Regt		TCF271
40 152mm How Bn	LTC SOKOLOV, O.	
Tgt Acq Btry		YVO103
U/I AT Bn	LTC PANKRATOV, A.	
U/I FROG Bn	LTC FILIPPOVSKIY, C.	
21 MRL Bn		MRI338
22 AA Regt		BCH233

(3) U/I Engineer Battalion, 34 MRD, 12 CAA.**Code Name—****Code Number—**

Unit	Commander	Code No.
CO	LTC SHEVYREV, G.	
Tech Co	CPT KOZHUKNOV, V.	
Pon Co	CPT LIKASHKOV, Ya.	

b. 39 Motorized Rifle Division, 12 CAA.
Code Name—
Code Number—SID357

Unit	Commander	Code No.
FDC	MG OREKHOV, B.	
66 MRR		
96 MRR	COL KABANOV, E.	
116 MRR		OMH268
U/I MTR		UDX197
U/I Indep Tk Bn	LTC SEMINOV, R.	
U/I Recon Bn		FUO136
U/I Engr Bn		DPS525
36 Cml Bn	LTC KHANIN, A.	
31 MT Bn	LTC SAVITSKIY, O.	
CofR		EOB310

(1) 116 Motorized Rifle Regiment, 39 MRD, 12 CAA.
Code Name—
Code Number—OMH268

Unit	Commander	Code No.
DC	LTC BASHIROV, V.	
Recon Co	CPT MANTULO, G.	
2 Mtr Rfl Bn	LTC BUDSHANY, B.	
Mdm Tk Bn		GZK714
How Btry		PGT678

(2) Division Artillery Elements, 39 MRD, 12 CAA.

Unit	Commander	Code No.
CRTA	COL PROKHOROV, F.	
39 Arty Regt	COL TRAPENZNIKOV, H.	
7 122mm How Bn		VIA968
97 122mm How Bn		IQY771
Tgt Acq Btry	CPT KOZLOV, M.	
68 AT Bn		SXC033
U/I AA Regt	COL DUSHENOV, N.	
25 MRL Bn	LTC IL'CHUK, E.	

(3) U/I Engineer Battalion, 39 MRD, 12 CAA.**Code Name—****Code Number—DPS525**

Unit	Commander	Code No.
CofS	MAJ YEGOROV, O.	
Tech Co	CPT TYURIN, M.	
Pon Co	CPT USATENKOV, D.	

c. 58 Guards Medium Tank Division, 12 CAA.**Code Name—****Code Number—YSM963**

Unit	Commander	Code No.
CG	LTG MAL'TSEV, A.	
HQ Elm		QMG749
130 GMTR	COL LYBIVYY, A.	WHZ981
U/I GMTR		HNU969
189 GMTR		
75 GMRR		
30 Recon Bn	LTC GRACHEV, Ya.	
U/I Engr Bn		BYN095
U/I Sig Bn	LTC TASHCHYAN, O.	
7 MT Bn	LTC MALIN, F.	
CofR		REP639

(1) 130 Guards Medium Tank Regiment, 58 GTD, 12 CAA.**Code Name—****Code Number—WHZ981**

Unit	Commander	Code No.
CO	COL LYBIVYY, A.	
Recon Co	CPT BUKLIKOV, G.	
1 Mdm Tk Bn	LTC GOLUBIN, C.	
3 Mdm Tk Bn		LBV244

(2) Division Artillery Elements, 58 GTD, 12 CAA.

Unit	Commander	Code No.
CRTA	COL BALYKOV, E.	
U/I Arty Regt	COL SHADUNTS, B.	XKE318

Unit	Commander	Code No.
141 122mm How Bn		CD3552
160 122mm How Bn		
Tgt Acq Btry	OPT CHESLAVSKIY, R.	
79 FROG Bn	LTC MATAKOV, I.	
91 AA Rgt		GLN455

d. 139 Pioneer Regiment, 12 CAA.

Unit	Commander	Code No.
CO	COL ANTONENKO, N.	
Engr Co		UFX391
Svc Co	CPT FEDOTOV, M.	
1 Brg Bn		KQC792
2 Brg Bn	LTC SAVCHENKO, Ya.	

e. 30 Guards Artillery Regiment, 12 CAA.

Code Name---

Code Number-- NQF568

Unit	Commander	Code No.
CO	COL BELOV, C.	
8 130mm Gun Bn	LTC ORENCHNIKOV, N.	
59 130mm Gun Bn	LTC GONCHAROV, E.	
5 152mm G/H Bn	LTC KOZLOV, F.	
Tgt Acq Btry		ZIS881

f. 3 SCUD Surface-to-Surface Missile Brigade, 12 CAA

Code Name---

Code Number-- BW5644

Unit	Commander	Code No.
FDC	COL MOTORICHEV, E.	
1 SCUD SSM Bn		RWM214
2 SCUD SSM Bn	LTC KURCHAK, K.	
1 SCUD SSM Btry		ENK584
2 SCUD SSM Btry	OPT PETROSOV, E.	

B-23 24 Combined Arms Army.

Code Name—

Code Number—MSY789

Unit	Commander	Code No.
CofS	LTG SHEVCHCHENKO, A.	
31 GMRD	LTG GONIODSKIY, A.	
46 MRD		
49 MRD	LTG PARKHOMENKO, B.	
50 TKD	LTG BETEKHTIN, C.	
57 TKD		
142 Pon Regt	COL PETRUKHIN, D.	
110 Arty Regt		AXT215
11G Arty Regt	COL KRIVTSOV, L.	
22 SCUD SSM Bde	MA ZAKHAROV, E.	PRO891
61 Engr Bde	LTC KIRILYUK, P.	
10 Engr Bn	LTC KUTS, P.	
23 Engr Bn	LTC PITIK, A.	
24 Engr Bn	LTC VASIL'YEV, Ye.	
18 MT Regt		ISF646
U/I Intel Bn	LTC SERENCHUK, P.	
U/I Sig Intcp Bn	LTC PASHCHENKO, M.	
U/I Cml Bn		BKY264
98 Med Regt	LTC AFANAS'YEV, D.	
54 Sig Regt		HZP212
CofR		QTA706

a. 31 Guards Motorized Rifle Division, 24 CAA.

Code Name—MOLODOY CHELOVEK

Code Number—

Unit	Commander	Code No.
CG	LTG GONIODSKIY, A.	
HQ Elm		WAH361
59 GMRR	COL SAPOZHINETS, D.	
84 GMRR		
120 GMRR		
87 GMTR	COL PECHERENKO, M.	

Unit	Commander	Code No.
U/I Indep Tk Bn		VOP032
U/I Recon Bn		DYZ092
U/I Engr Bn	LTC BESTUZHEV, L.	
U/I Sig Bn		MCU728
113 Cml Bn	LTC BUYNEVICH, Ya.	
47 Maint Bn	LTC DOLGIKH, B.	
CofR		GAB410

(1) 89 Guards Motorized Rifle Regiment, 81 GAR D, 24 CAA.
 Code Name--BABUSHA
 Code Number--

Unit	Commander	Code No.
CO	COL SAPOZHINETS, D.	
Recon Co.		FMG355
1 Mir Rfl Bn	LTC NESTEROV, P.	
3 Mir Rfl Bn		SZV937
Mdm Tk Bn	LTC GUSEYNOV, A.	
AA Btry	CPT KONTRULE, G.	

(2) Division Artillery (Heavy) (24 CAA).

Unit	Commander	Code No.
CRTA	COL SHABROV, N.	
1 Arty Regt.	COL SHABROV, N.	
60 122mm how		XU0781
21 152mm how Bn	LTC MURAVLEV, G.	
U/I FICS Bn		OC1730
31 AT Bn	LTC BOLODINKOV, E.	
U/I AA Regt		INF922

b. 46 Motorized Rifle Division, 24 CAA.

Code Name--GLUPY DURAK
 Code Number--

Unit	Commander	Code No.
CofS	MG ALATYRTSEV, R.	
HQ Elm		RFK465
144 MBR	COL CHURLIN, K.	

Unit	Commander	Code No.
146 MRR		TVW401
150 MRR		
131 MTR	COL FEDRORIN, C.	
U/I Indep Tk Bn		
U/I Recon Bn		YER800
U/I Engr Bn	LTC BARCHENKOV, P.	
34 Sig Bn	LTC BELOTELOV, K.	
85 Med Bn	LTC SEMED'YANOV, Yu.	
CofR		FBV277

(1) 144 Motorized Rifle Regiment, 46 MRD, 24 CAA.**Code Name—TEMNAYA NOCH'****Code Number—**

Unit	Commander	Code No.
CO	COL CHURLIN, K.	
Engr Co	SrLT RYABUKHIN, O.	
1 Mtr Rfl Bn		AMN085
3 Mtr Rfl Bn		CXG139
Mdm Tk Bn	LTC KRABCHUN, A.	

(2) 131 Medium Tank Regiment, 46 MRD, 24 CAA.**Code Name—****Code Number—**

Unit	Commander	Code No.
CO	COL FEDRORIN, C.	
Recon Co	SrLT ANIKANOV, R.	
1 Mdm Tk Bn	LTC BUZANOV, T.	
2 Mdm Tk Bn		VCB913

(8) Division Artillery Elements, 46 MRD, 24 CAA.

Unit	Commander	Code No.
CRTA	COL KRAVCHKO, N.	
86 Arty Regt	COL GRINKEVICH, R.	
162 122mm How Bn		RSH526
8 152mm How Bn		
Tgt Acq Btry	CPT MEL'SHIKOV, A.	

Unit	Commander	Code No.
49 FROG Bn	LTC VOLKOV, G.	
56 AT Bn	LTC GRISHIN, B.	
U/I AA Regt	COL BARABANOV, E.	

c. 49 Motorized Rifle Division, 24 CAA.

Code Name—INTERESNY ZHURNAL

Code Number—

Unit	Commander	Code No.
CG	LTG PARKHOMENKO, B.	
HQ Elm		LMQ999
168 MRR	COL BASKOV, P.	
172 MRR		MKY122
177 MRR	COL SOSHNIKOV, E.	
160 MTR	COL PODAYADOV, I.	
U/I Indep Tk Bn	LTC VASILY, B.	
53 Recon Bn	LTC GROMYSHEV, P.	WOL818
35 Engr Bn		UPC141
CofR		PFK837

(1) 172 Motorized Rifle Regiment, 49 MRD, 24 CAA.

Code Name—

Code Number—MKY122

Unit	Commander	Code No.
CofS	LTC NIKITENKO, I.	
Engr Co		ODT023
1 Mtr Rfl Bn	LTC BARANOV, F.	
Mdm Tk Bn		ZY367
How Btry	SrLT ANYUKHIN, A.	

(2) 160 Medium Tank Regiment, 49 MRD, 24 CAA.

Code Name—

Code Number—

Unit	Commander	Code No.
CO	COL PODAYADOV, I.	
Recon Co	CPT POROSHIN, C.	
1 Mdm Tk Bn	LTC SHUSTIKOV, B.	
3 Mdm Tk Bn		GAZ668

(3) Division Artillery Elements, 49 MRD, 24 CAA.

Unit	Commander	Code No.
CofS	LTC AVASASHVILI, D.	
U/I Arty Regt	COL ULYATOVSKIY, E.	
172 122mm How Bn	LTC YERSHIKOV, L.	
50 152mm How Bn		
Tgt Acq Btry		IHD682
86 FROG Bn	LTC MUKHAMEDOV, M.	

d. 50 Medium Tank Division, 24 CAA.**Code Name—PERCHATKI****Code Number—**

Unit	Commander	Code No.
CG	LTG BETEKHTIN, C.	
168 MTR	COL KUDRAYASHOV, A.	
171 MTR		QZG782
175 MTR		
180 MRR	COL MATVEYKOV, A.	
U/I Recon Bn	LTC YUTSEVICHUS, T.	
U/I Engr Bn		SGU392
U/I MT Bn		NQS915
75 Med Bn	LTC MIKHAYLOV, K.	
CofR		HVN276

(1) Division Artillery Elements, 50 TKD, 24 CAA.

Unit	Commander	Code No.
CofS	LTC RUDNYY, A.	
U/I Arty Regt	COL GASTELLO, I.	
39 122mm How Bn		HIE741
107 122mm How Bn	LTC POPENKO, R.	
153 122mm How Bn	LTC ULIKHIN, H.	
U/I FROG Bn		KRA513
51 AA Regt		

(2) U/I Engineer Battalion, 50 TKD, 24 CAA.

Code Name—

Code Number—SGU392

Unit	Commander	Code No.
CofS	MAJ NOVIKOV, I.	
Tech Co	SrLT BAZHANOV, R.	
Pon Co	CPT MURZIN, K.	

e. 57 Medium Tank Division, 24 CAA.

Code Name—DVOYURODNY BRAT

Code Number—

Unit	Commander	Code No.
FDC	MG CHERNOMORTSEV, F.	
HQ Elm		TLF224
156 MTR	COL SELIVERSTOV, A.	
161 MTR	COL BETSKOY, P.	
167 MTR		YEP269
153 MRR	COL VOROSHILOV, M.	
19 Recon Bn	LTC SHCHERBAKOV, P.	
U/I Engr Bn	LTC YERZH, W.	
92 Sig Bn	LTC STRUYEV, C.	
CofR		BWX389

(1) Division Artillery Elements, 57 TKD, 24 CAA.

Unit	Commander	Code No.
U/I Arty Regt	COL KOSTIKOV, B.	
126 122mm How Bn		DVT363
201 122mm How Bn		LMQ570
239 122mm How Bn	LTC KURGANSKIY, K.	
U/I FROG Bn	LTC ABASHIN, I.	
81 AA Regt		EHO111

(2) 19 Reconnaissance Battalion, 57 TKD, 24 CAA.

Code Name—

Code Number—

Unit	Commander	Code No.
CO	LTC SHCHERBAKOV, P.	
Amph Tk Co	CPT YAKUSHEV, L.	
LRR Co	CPT SAMARSKIY, F.	

f. 110 Artillery Regiment, 24 CAA.**Code Name—****Code Number—AXT215**

Unit	Commander	Code No.
CofS	LTC GRIGOR'YEV, C.	
91 130mm Gun Bn	LTC GOLUBCHIK, B.	
102 130mm Gun Bn		FGL046
U/I 152mm G/H Bn	LTC KISELEV, N.	QBC332

g. 11 Guards Artillery Regiment, 24 CAA.**Code Name—TRUDNOYE DELO****Code Number—**

Unit	Commander	Code No.
CO	COL KRIVTSOV, L.	
4 130mm Gun Bn	LTC KALYAKIN, M.	
41 130mm Gun Bn	LTC SHPIRKO, Z.	
7 152mm G/H Bn	LTC KARBYSHEV, O.	

h. Air Defense Elements, 24 CAA.

Unit	Commander	Code No.
U/I GANEF SAM Bde	COL KUKUSHKIN, I.	
1 GANEF SAM Bn		IHK803
2 GANEF SAM Bn		WOZ179
U/I GAINFUL SAM Regt		HYR651

B-24 8 Guards Tank Army.**Code Name—PLOKHOY SON****Code Number—WXM735**

Unit	Commander	Code No.
CofS	LTG SHPARKOVSKIY, G.	
52 GTD	LTG KANASHKIN, W.	
61 GTD	LTG BUTKIN, I.	
63 GTD		XRM948
25 Arty Regt	COL BESPALOV, Y. U.	RLD058
28 SCUD SSM Bde		OCS772
1 SAM Bde (GANEF)		ERC856
22-MT-Regt	COL MOSLALYUK, B.	SKU735

Unit	Commander	Code No.
U/I Intel Bn		BTV061
U/I Sig Intcp Bn	LTC BLOSHENKO, C.	
45 Sig Regt		FDL151
69 Med Bn	LTC SOTNIKOV, L.	
92 Cml Bn	LTC BOVVAN, P.	
CofR		KIE502

a. 52 Guards Medium Tank Division, 8 GTA
Code Name—GALSTUK
Code Number—

Unit	Commander	Code No.
CG	LTG KANASHKIN, W.	
HQ Elm		TZI483
55 GMTR	COL BATURINTSEV, I.	
U/I GMTR		ADN553
115 GMTR	COL NIKOLAYEVSKIY, K.	
64 GMRR		YGH586
U/I Recon Bn	LTC YAROSHENKO, R.	
U/I Engr Bn		COF274
79 Cml Bn	LTC ROY, E.	
CofR		MUY387

(1) 55 Guards Medium Tank Regiment, 52 GTD, 8 GTA.
Code Name—SHELKOVY CHULOK
Code Number—

Unit	Commander	Code No.
CO	COL BATURINTSEV, I.	
Recon Co		ZNO719
1 Mdm Tk Bn	LTC BEZYMENSKY, I.	
2 Mdm Tk Bn		USA521
3 Mdm Tk Bn	LTC KASHURNIKOV, T.	

(2) Division Artillery Elements, 52 GTD, 8 GTA.

Unit	Commander	Code No.
5 Arty regt	COL SAKHATSKIY, A.	
83 122mm How Bn		GFW785

Unit	Commander	Code No.
235 122mm How Bn	LTC KOLOMIYTSEV, O.	
Tgt Acq Btry		NPG301
U/I FROG Bn	LTC VOLNYANSKIY, M.	

b. 61 Guards Medium Tank Division, 8 GTA.

Code Name—DOZHDEVIK

Code Number—

Unit	Commander	Code No.
CG	LTG BUKTIN, I.	
FDC	MG BEDZHANYAN, D.	
196 GMTR	COL DEGTYARENKO, M.	
U/I GMTR		PWX453
U/I GMTR		VXP920
111 GMRR	COL KHIL'KEVICH, K.	
25 FROG Bn	LTC SAVCHENKO, R.	
41 MRL Bn	LTC PAVLOV, V.	
U/I Arty Regt		ACF611
4 122mm How Bn	LTC IL'YASHA, I.	
10 122mm How Bn	LTC SIDORV, B.	
U/I Recon Bn	LTC VERSHININ, N.	
U/I Engr Bn		BTN889
47 Sig Bn	LTC ZVONOV, P.	
CofR		NQO530

c. 63 Guards Medium Tank Division, 8 GTA.

Code Name—

Code Number—XRM948

Unit	Commander	Code No.
CofS	MG NAYDENKO, U.	
188 GMTR		
194 GMTR	COL BILIBINOV, T.	
U/I GMTR		XLP501
118 GMRR		
21 Recon Bn		SKV105
U/I Engr Bn	LTC NIKLTENKO, Ya.	CGF642
U/I Cml Bn	LTC TRLETSKIY, C.	

(1) 188 Guards Motor Rifle Regiment, 8 GVA.

Code Name--RUSKYNAROD

Code Number--

Unit	Commander	Code No.
CO/S	LT NECHATEV, I.	
1 Motor Tk Bn	LTC KUDYUYEV, A.	
3 Motor Tk Bn		MZI709

(2) Division of Artillery, 110 GVA.

Unit	Commander	Code No.
75G Arty Regt	COL OVCHARENKO, M.	
125 122mm How Bn		KRL384
180 122mm How Bn		TMG848
Tgt Acq Btry		ODQ578
44 MRL Bn		PSW023

d. 76 Artillery Regiment, 8 GVA.

Code Name--

Code Number--37038

Unit	Commander	Code No.
CO	COL BESPALOV, Y. U.	
CO/S	LTC CHEKAREV, E.	
55 130mm Gun Bn	LTC RUBAN, D.	
38 152mm G/H Bn	LTC GOLITSYNS, F.	
Tgt Acq Btry		FUE678

e. 23 SCUDS "Vostok" Missile Brigade, 8 GVA.

Code Name--

Code Number--07512

Unit	Commander	Code No.
CO/S	COL S. MOZINA, A.	
1 SCUD Bn		DVC637
2 SCUD Bn		MZI451

B-25 17 Tactical Air Army.

Code Name—NOZHNITSY

Code Number—

Unit	Commander	Code No.
CG	A/A GEN BORETSKY, P.	
FDC	C/GEN LUKAN, I.	
4 Ftr-Bmr Div	LTG DEDOV, B.	
7 Ftr-Bmr Div.		PIA953
22 Lt Bmr Regt	COL NEVSKIY, D.	
5 Recon Regt	COL BOLOTNIKOV, S.	VXQ715
9 Recon Regt		FRY642
11 Trans Sqdn	COL KATYS, A.	
45 Hel Regt		IHF486
89 Hel Regt		LCB106

B-26 4 Airborne Rifle Division

Code Name—MUZHSKOY KOSTYUM

Code Number—TAN817

Unit	Commander	Code No.
FDC	MG STAROSTIN, I.	
22 Abn Rfl Regt	COL BORODINOV, O.	
34 Abn Rfl Regt		GKL361
100 Abn Rfl Regt	COL TRYKOV, D.	
38 Recon Co	CPT ASTAKOV, F.	
U/I Engr Bn		QST458

Unit History. Activated in _____ as an infantry division. Redesignated in _____ as an Airborne Rifle unit after an extensive training cycle. The 4th is believed to be the first air borne unit to be equipped with the BMD. Date of assignment to the SOUTHERN FRONT is believed to be _____.

B-27 16 Arty Division.

Code Name—

Code Number—GFO320

Unit	Commander	Code No.
FDC	MG PLATONOV, P.	
29 130mm Gun Regt	LTC VORNOY, S.	

Unit	Commander	Code No.
33 130mm Gun Regt	COL SHVEDOV	ABA682
14 152mm G/H Regt	LTC FROLOV, B.	
3 MT Bn	LTC NIKITIN, V.	
U/I Sig Co		BTO041

Unit History. Unit was activated in _____ as a training division. Assigned to the SOUTHERN FRONT when tank heavy forces were assigned to the NORTHERN FRONT. The 16th is believed to lack depth in experienced personnel in some command positions.

Section 4

B-28 Homeland Forces

In addition to the forces deployed in the Northern, Central, and Southern Europe FRONT areas, other major tactical units have been identified in the Homeland. A partial listing of these units is contained in paras B-29, 30, 31, & 32. Units that are carried as being unlocated in para B-33, are confirmed units whose present locations are unknown, and also may be found in any operational area. Other front-sized organizations have been identified as being in existence and are believed to be located in other operational areas.

B-29 Armies.

Unit	Commander	Code No.
26 TAC Air Army		ORK321
27 TAC Air Army		
30 TAC Air Army		
76 CAA		AIR644
94 CAA		HNX954
98 CAA		ZHA393
37 TKA	A/GEN DZAHOEYEV, N.	
91 GTA	A/GEN BUCHINSKIY, O.	

B-30 Independent Divisions.

Unit	Commander	Code No.
51 Abn Rfl Div		UFK296
70 Abn Rfl Div	LTG BORTNYANSKY, D.	
88 Abn Rfl Div		GYD890
46G Arty Div	LTG DABAYEV, B.	
60 Arty Div		
70 Arty Div		

Unit	Commander	Code No.
43 MRD		
55 MRD		
66 MRD		VEK050
84 GMRD		QYT724
87 GMRD	LTG SVETLAKOV, A.	
89 GMRD		LWS830
95 GMRD	LTG BOBORYKIN, K.	
100 MRD		
111 MRD		
116 GMRD		
124 MRD		
127 MRD		
148 GMRD	LTG MAGRITSKIY, P.	

B-31 Independent Brigades

Unit	Commander	Code No.
26G HAB	COL PEREKHODKO, I.	
37 Hv Arty Bde		EGT863
46 Hv Arty Bde		
54 Hv Arty Bde	COL BOTVINNIK, L.	
55 Hv Arty Bde	COL OVSYANNIKOV, C.	
57 Hv Arty Bde		
58 Hv Arty Bde		
66G HAB		RBZ642
72 Hv Arty Bde		
77 Hv Arty Bde		
82G HAB		VNE300
90G HAB		
52 SAM Bde GANEF	COL GATS'KO, E.	MOY871
54 SAM Bde GANEF		GVI040
56 SAM Bde GANEF		
57 SAM Bde GANEF		
60 SAM Bde GANEF		BFP194
70 SAM Bde GANEF	COL ZIMANKOV, K.	
84 SAM Bde GANEF		HVF346

Unit	Commander	Code No.
21 SCUD SSM Bde	MG BEDZHANYAN, L.	CIS801
23 SCUD SSM Bde		
26 SCUD SSM Bde		YLA578
29 SCUD SSM Bde		
31 SCUD SSM Bde	MG BELIN, G.	
34 SCUD SSM Bde		
41 SCALEBOARD SSM Bde	MG GOLODNOV, L.	
44 SCALEBOARD SSM Bde		RCQ102
45 SCALEBOARD SSM Bde		
49 SCALEBOARD SSM Bde		
53 SCALEBOARD SSM Bde		LOG389
55 SCALEBOARD SSM Bde	MG BOCHVAR, P.	CWN640

B-32 Independent Regiments.

Unit	Commander	Code No.
14 Engr Regt (Ry Brg)		K3W614
18 Engr Regt (Ry Brg)		TCL509
20 Engr Regt (Ry Brg)	COL BOGOMOLEV, F.	
3 SAM Regt GAINFUL	COL MYEZA, H.	
7 SAM Regt GAINFUL		HR193
9 SAM Regt GAINFUL		
15 SAM Regt GAINFUL		
21 SAM Regt GAINFUL	COL POLYAK, M.	ZTX601
23 SAM Regt GAINFUL		DXC333
30 SAM Regt GAINFUL		
33 SAM Regt GAINFUL		
36 SAM Regt GAINFUL		
43 SAM Regt GAINFUL		GA1340
46 SAM Regt GAINFUL	COL BOGOMOLEV, B.	OKB486
51 SAM Regt GAINFUL		UDF435
54 SAM Regt GAINFUL		
59 SAM Regt GAINFUL		
60 SAM Regt GAINFUL		SVT612
62 SAM Regt GAINFUL		
64 SAM Regt GAINFUL		NEK632

Unit	Commander	Code No.
16 SAM Regt SA-8	COL SHALMAN, P.	
17 SAM Regt SA-8	COL KOMISARIK, C.	
20 SAM Regt SA-8		
25 SAM Regt SA-8	COL BERIKOV, F.	FSZ043
28 SAM Regt SA-8		
41 SAM Regt SA-8		PTM228
47 SAM Regt SA-8		WMD660
53 SAM Regt SA-8	COL KOLOBOV, A.	
58 SAM Regt SA-8		
61 SAM Regt SA-8		
69 SAM Regt SA-8		XUO401
16 Arty Regt		
29 Arty Regt		
41 Arty Regt		
42 Arty Regt	COL SERGIYENKO, B.	LXM523
49 Arty Regt		WUO890
53 Arty Regt		
67 Arty Regt		
70 Arty Regt	COL KOCHETOV, G.	
76 Arty Regt		
80 Arty Regt	COL MIKHEYEV, P.	

B-33 Unlocated Units.

Unit	Commander	Code No.
19 GTA	A/GEN VORSAYEV, P.	AZU976
5 GTD	LTG BRYLEV, W.	
75 GTD	LTG MERKIN, I.	TEP241
33 GMRD		QYB728
42 GMRD		LVI000
22 CAA	A/GEN FREYLIKH, A.	
35 GMRD	LTG KOSYREV, E.	CPR055
61 MRD		KFX200
76 GMRD	LTG YEPISHEV, R.	
101 GMRD		ZSH018
106-MRD		RAC716

Unit	Commander	Code No.
26 TKD	LTG BIRYUKOV, I.	
16 Abn Rfl Div	LTG VASHKEVICH, P.	MQK398
9 GTD		DGS015
17 GTD		SNY910
20 GTD	LTG DRANNIKOV, C.	
40 GTD	LTG PASYNKOV, M.	
78 GTD		UWT790
83 GTD		
10 GMRD	LTG SHLYANDIN, E.	
20 GMRD		VLM316
74 MRD	LTG KUZ'MENKO, T.	
85 MRD		ERD428
90 MRD	LTG ROZHKOVSKIY, D.	
U/I MRD	LTG BAKST, H.	
U/I GMRD		IXU411
59 Hv Arty Bde		FBL238
62 Arty Div	LTG BALAZKI, L.	
67G Arty Div		NCZ244
17 Arty Regt		
33 Arty Regt		HIN472
34G Arty Regt	COL OSIN, D.	
79 Arty Regt	COL LAGOSYUK, I.	
U/I Arty Regt	COL GORYUNOV, F.	
40 SAM Bde GANEF		YHA279
48 SAM Bde GANEF	COL GUTSU, P.	
65 SAM Bde GANEF		OKF662
62 SCUD SSM Bde	MG PYROV, D.	
72 SCUD SSM Bde		ATO780
24 SCALEBOARD SSM Bde		WZV317
30 SCALEBOARD SSM Bde	MG SIVENKO, P.	
37 SCALEBOARD SSM Bde	MG VORONOV, P.	
4 Engr Bde	COL ANTONENKO, A.	
9 Engr Bde		GMQ900
13 Engr Bde		
21 Engr Bde		XDG393

Unit	Commander	Code No.
27 SAM Regt GAINFUL		POE160
31 SAM Regt GAINFUL	COL SHIPKOV, B.	
37 SAM Regt GAINFUL	COL MALKOV, A.	
66 SAM Regt GAINFUL		BUW505
29 SAM Regt SA-8		OBK362
35 SAM Regt SA-8	COL KRAYZ, M.	
42 SAM Regt SA-8	COL VOLCHIK, N.	
76 SAM Regt SA-8		NPI845
4 Tk TV Bn	LTC CHALGANOV, C.	CME411
5 Tk TV Bn	LTC KAPBA, M.	HDC227
8 Tk TV Bn	LTC ZIMIN, D.	
9 Tk TV Bn	LTC RUZANOV, A.	
12 Tk TV Bn	LTC VRAGOV, I.	

Appendix

C UNIT IDENTIFICATION

Section 1—Code Numbers

Code numbers are permanently assigned to each unit in the military establishment, but may be changed for the duration of a given operation. Opposing forces, for security reasons, often refer to specific units by their code numbers. Code numbers for all units appear to be assigned in a completely arbitrary manner. A listing with a paragraph reference from Appendix B for all known code numbers is provided below for the user.

ABA682	27
ABT081	8a
ABZ018	6a
ACB658	7b
ACC903	16
ACE342	3a(1)
ACF611	24b
ADN553	24a
ADX847	3g(1)
AEI826	13b(1)
AHD427	4d
AIM634	7d
AIR644	29
ALN901	4e
ALV334	13
AMZ198	21d(2)
ANM085	23b(1)
ANR057	3a(3)
ANR128	8a
ANW749	15
AOT987	3d
ARX146	16a
ASK257	13c

ATO780	33
AUE055	14e
AUL552	14a
AVE821	3d
AXM716	3
AXT215	23f
AYM042	15c(2)
AYT244	6b
AZI178	5a
AZN101	8f
AZN485	9
AZU976	33
BAV026	14a
BCF000	5e
BCH233	22a(2)
BCG427	3a(2)
BCV293	15b
BDQ746	15h
BDS102	21f
BDT086	4b
BEX223	15e
BFF798	4b
BFP194	31

BKG476	7e
BKY264	23
BLD174	7c
BLP744	13b
BNC820	16b
BON188	8
BQW467	3a(1)(a)
BSM740	21b(2)
BTN889	24b
BTO041	27
BTO574	12
BTP653	15a(3)
BTV061	24
BUW505	33
BVT064	5e
BVW847	4a(2)
BWR444	14c
BWS644	22f
BWT574	6e
BWX389	23e
BYD478	3
BYF393	16d
BYN095	22c

BYZ035	7c	CUO482	4c	DVQ611	8e
BZK038	3h(1)	CUO964	4e	DVT363	23e(1)
CAL215	22a(1)	CVA943	15i	DVV941	15
CBG549	5h	CWN640	31	DXC866	32
CBQ720	7i	CXG139	23b(1)	DXT717	4
CBW907	13b(2)	CZP146	21f	DYZ092	23a
CDB552	22c(2)	CZT706	15a(3)	EAN498	3a
CDC963	19	CZV848	7c	EAO641	3b
CDG144	14f	DAV931	17	EBI741	7a
CFD605	3f	DBV866	4a(3)(a)	ECB865	13d
CFP987	6a(2)	DCL974	15c(1)	EDK295	16c
CFX209	4f	DCW616	7b	EGT863	31
CGA658	3c	DDD105	14b	EHK584	22f
CGF642	24c(2)	DFV758	21g	EHO111	23e(1)
CGK461	3g	DGP122	14b	EHR104	6a(5)
CID594	3b(2)	DGR465	14c	EKF139	7i
CIH672	4a(5)	DGS015	33	EKO507	15a(1)
CKR629	21a	DGS108	7d	EMF905	14a
CLM013	6f	DIA176	15a(1)	EMG053	21c(3)
CLS589	14a	DIP509	3c(1)	EMH006	3g
CLU435	2	DIY959	8e	ENO829	3c(1)(a)
CLW909	16	DKM731	5	ENR582	21d(3)
CLX491	12	DMG390	13c	EOB310	22b
CME411	33	DMH359	14f	EOK000	13a(2)
CMZ322	4e	DMT289	21	EOL428	2
COF274	24a	DNX481	6a	EOU262	20
CPR055	33	DPS525	22b(3)	EPG809	5c(1)
CQL448	15b	DPZ101	3c	EPH193	12
CRH233	21c(1)	DQG100	6a(3)	EPI216	4a(2)
CRZ276	13	DQY744	3i	EPI552	7a
CSW999	5g	DSM521	3b	EQX161	15d
CTE807	16c	DTS612	13a	ERA532	5
CTK212	20	DTU147	21a	ERB062	10
CTZ328	3a(3)	DTV597	5a	ERB121	8b
CUI421	8a	DVC497	24e	ERC856	24
CUI951	8h	DVQ271	9	ERD428	33

ERL168	8a
ERO767	16a
EUA860	21a(2)
EWS278	16a(1)
EYI749	4b
FAL657	8f
FAL766	12
FBL238	33
FBV277	23b
FCC827	15
FDB567	4d
FDL151	24
FDM303	13a
FEW462	15d
FFZ098	6
FGB341	21b
FGD021	14g
FGH861	16b
FGI314	16a
FGL046	23f
FGL094	15a(1)
FMG355	23a(1)
FMP921	2
FOE101	3a(3)
FPG608	20
FPR294	6c(1)
FRY642	25
FSM482	3j
FSZ043	32
FUB676	24d
FUO136	22b
FVN797	13e
FVU503	3c(1)(b)
FWA307	14b
FWS711	6a(3)
FWZ488	13a(1)

FXE616	4
FXG088	4a(4)
FXQ600	7a
FYD465	8b
FZV829	3a
GAB410	23a
GAH010	5a
GAI340	32
GAL666	3f(1)
GAZ668	23c(2)
GBD085	15a(3)
GBY039	16a(1)
GBZ809	3c(1)(a)
GEN476	3b
GFO320	27
GFW785	24a(2)
GHA507	6d
GIX334	16c(1)
GKL361	26
GKM584	13b
GKR932	3a(1)
GLF664	4e
GLH919	20
GLN455	22c(2)
GLU253	15c(2)
GMQ900	33
GNE260	15b
GOE379	21a(2)
GOK358	6d
GOP282	4c
GPB474	13a(1)
GPH447	8a
GQS013	14d
GRH193	22a
GRQ866	15b
GST228	7b

GTA682	4a
GTB551	14c(1)
GTM752	6b(1)
GUY481	5c
GVI040	31
GVM130	19
GWF099	11
GWX861	12
GYD890	30
GZK714	22b(1)
HAA305	3
HAI766	6b
HAN746	7c
HBK129	15d
HBV694	16e
HDC277	33
HDH315	14a
HDI256	21b
HDN485	5b
HEM496	13d
HEP626	3e
HEP824	4a
HFY287	7h
HIE741	23d(1)
HIN472	33
HIX637	8c
HIX771	8h
HKV078	5f
HKY478	4b
HND094	20
HNT896	15f
HNU969	22c
HNX954	29
HPI465	23b
HPQ864	21j
HPR648	18

HQF933	3b
HQN821	2
HRD530	7a
HRS354	16b(1)
HUP897	3a
HUX417	13a(3)
HVF346	31
HVN276	23d
HVO305	8f
HVZ535	4e
HXN647	3d
HXO610	15b
HXP925	15a
HYR651	23h
HZD913	14a
HZM394	16
HZP212	23
HZV485	4a(1)(b)
IAB417	7f
IAH709	4a(6)
IAR978	15c(2)
IBL321	3b(1)
IDQ585	3d
IEA444	4b
IEH622	5h
IEN637	21b
IEQ961	15a(2)
IGE349	20
IHB781	14c
IHD682	23c(3)
IHE559	13a(1)
IHF486	25
IHK803	23h
IHR183	32
IHX650	22
IPS426	3h(2)

IPT579	16b(1)
IPU124	16b
IQY771	22b(2)
IRX615	6b
ISF646	23
ISH846	4a(5)
IVH435	3a(1)
IWX138	5c(1)
IXF882	12
IXG742	3b
IXM523	32
IXU411	33
IXW712	8g
IXZ676	5c
IYC756	15
KAA999	4a(5)
KBL371	7e
KBW614	32
KCD315	13b
KCF729	3c
KCR003	8
KCR477	10
KED310	16
KER942	4a(3)
KFD686	22a(1)
KFG948	14b
KFU356	7c
KFX200	33
KHQ520	21
KHU067	12
KIE502	24
KLC421	7i
KLX628	15b
KMT917	3k
KNH114	3a
KNO522	13f

KOC890	15c(1)
KQC792	22d
KQF167	21c(2)
KRA513	23d(1)
KRH096	3b(1)
KRL084	24c(2)
KTU544	21d(1)
KUB476	5g
KVF079	6a(2)
KVM269	14c(2)
KVQ088	3f
KVZ808	5a
KYI947	4b
KYR737	5
LAC983	6d
LBE478	14c(1)
LBV244	22c(1)
LCB106	25
LDI244	8f
LDQ582	5g
LEQ477	12
LFD036	8e
LFD812	13
LGE225	4d
LKC331	3a(2)
LME251	7b
LMQ570	23e(1)
LMQ999	23c
LNE922	23a(2)
LNK188	4a(3)
LOU191	3a
LPI661	14e
LPV939	6a(1)
LOG389	31
LSA887	14c(2)
LSM834	15c

LUA694	21e
LUH753	16a(2)
LVI000	33
LVO999	13b(2)
LWA859	16c
LWM007	4
LWQ938	4a(5)
LWS830	30
LXD578	15h
LYN444	4
LYN673	3e
LYZ259	3b
MCG304	18
MCU728	23a
MDG800	7a
MEC136	10
MFN965	14f
MFV435	16b(1)
MGQ832	6a(3)
MGT408	14
MGU897	4e
MHA643	6f
MHK157	4
MHZ171	15c
MKY122	23c(1)
MNH035	13a
MOY871	31
MPG929	3a
MPS842	6
MQC652	16c
MQH568	7d
MQK398	33
MQO435	5e
MRI338	22a(2)
MSY151	13c
MSY789	23

MTU777	3a(2)
MUY387	24a
MXC968	3j
MXP616	14c
MYK568	21a(1)
MZI709	24c(1)
MZR371	3c
MZZ393	4e
NCG304	18
NCU243	14g
NCZ244	33
NDI526	3a(4)
NEK632	32
NEP258	6c
NEP329	4e
NFW014	12
NGM968	8e
NHQ493	3a(1)
NHZ556	13d
NKC825	21a
NLK417	19
NLW066	22a
NMQ437	5f
NOA619	3c(1)
NOB831	3h(1)
NOE299	6f
NOT926	14b
NPG301	24a(2)
NPI845	33
NPV338	16
NPV543	8b
NQF568	22e
NQO530	24b
NQS915	23d
NRL402	3c(2)
NRL780	2

NTR493	16a(1)
NUQ209	4a(1)
NWI071	15c(3)
NXC550	6b
NXY023	7c
NYR803	13a(3)
NYS342	15a(4)
NYZ192	7b
OAZ638	8b
OBD426	4a(4)
OBE301	4a
OBK362	33
OBL755	21c
OCS772	24e
OCT280	16
ODQ578	24c(2)
ODT023	23c(1)
OEK585	6b
OEM949	3c
OER517	7e
OGL730	23a(2)
OIB226	21
OKB498	32
OKF359	6e
OKF662	33
OKM855	16f
OLD437	5a
OLK953	3a(1)
OLT479	22a
OMH268	22b(1)
OPG242	15a(3)
OQA319	11
OQZ195	14c(1)
ORK321	29
OSD528	13
OTF157	13a(3)

OTG000	3k
OTP232	14h
OUA076	3a(4)
OUY046	13d
OYB751	6c(2)
OZI087	3f
PBC024	20
PBT169	8a
PCG773	21a
PCR831	8
PCS269	5a
PFE232	15a(2)
PFK837	23c
PGB421	3b
PGB830	15e
PGT678	22b(1)
PGT767	6a(4)
PIA953	25
PIW249	4f
PIX359	7e
POE160	33
POQ815	8d
PQG147	3d
PRC712	4b
PRO891	23
PRY941	7a
PSF484	4a(3)
PSK972	6c
PSW026	24c(2)
PSY853	3
PTB624	3
PTM228	32
PUB672	17
PUO070	6c(1)
PVI003	6c(1)
PVI491	13a(1)

PWR591	3g(1)
PWX453	24b
PWY602	14g
PYK178	21d(2)
QBC332	23f
QCB173	4a(5)
QDI300	21h
QFG825	15c(2)
QGS204	6e
QGT581	3h(2)
QHT173	7c
QHV437	8a
QIS801	31
QKF828	13e
QKN854	13b
QMG749	22c
QND587	3a
QNF903	8g
QOY497	6a(1)
QPB319	8g
QRB534	4
QRL199	3a(1)
QSA161	5c
QST458	26
QSX395	14c
QTA706	23
QTZ388	20
QVI924	15a(3)
QWS963	3b
QXF789	16a
QYB728	33
QYT724	30
QYZ572	4a
QZG782	23d
QZI431	5f
QZI828	17

QZP359	21a(2)
QZR317	15f
RAB003	5d
RAC716	33
RBL397	13f
RBZ642	31
RCI096	21h
RCL107	13d
RDC010	7c
REP639	22c
RGQ102	31
RHB578	16a(1)
RID568	21b(2)
RIS839	4
RKC031	21c(3)
RLA503	6a(3)
RLD058	24d
RLF115	8e
RLK527	3
RLT222	3c
RLW067	3g
RMG846	5f
RMY028	10
ROA400	4c
ROL318	4b
ROV185	14h
RSC671	2
RSH526	23b(3)
RUK661	15i
RVH281	14b
RWB196	15b
RWM214	22f
RXD262	16c
RXU123	7b
RYZ465	7f
RZM557	13b

SCI020	3a(1)	TAP683	4e	TZP421	3a(4)
SDL671	13b(1)	TAZ847	4c	UAD593	3c(1)
SEV094	21d	TAZ860	4d	UAS349	13a
SFA935	8b	TBC914	3j	UAY258	15a(5)
SFK296	4b	TBV636	4b	UBQ631	3b
SGU392	23d(2)	TBV687	3e	UBW156	6a(4)
SHF441	7b	TCF271	22a(2)	UCF473	3f(2)
SHK147	5	TCG587	21d(1)	UDH466	32
SHU187	2	TCL509	32	UDX197	22b
SHZ955	3j	TEA674	9	UEA777	3c(1)
SID357	22b	TEN957	14b	UFK296	30
SIW206	4d	TEP241	33	UFX391	22d
SKH292	9	TEX510	8c	UHO188	16c(1)
SKH643	8c	TFW114	13f	UIH973	12
SKU735	24	TGL634	4a(2)	UKE790	15c
SKV105	24c	TKB398	15h	UKO327	16b
SKV286	14	TLE334	9	ULT216	14d
SMF084	16b	TLE452	8b	UMD663	8d
SMF477	2	TLF244	23e	UOE936	7a
SMG762	4a(1)(a)	TMG848	24c(2)	UOF414	5b
SMX796	3d	TMH811	15	UOP905	4a(1)
SNY910	33	TMN190	19	UPC141	23c
SOT955	12	TMQ797	7a	UPQ145	3b
SPQ863	21b(1)	TNE886	6a(1)	USA521	24a(1)
STE698	13f	TNR833	21a(2)	USO275	9
STH935	7i	TOA567	8f	USO466	8g
SUA261	8b	TOK255	16b	UWT790	33
SUP556	21d	TOU472	13a(1)	UWX572	8d
SVE488	16a	TOW524	7d	UWX883	7e
SWN861	6a(3)	TRH982	15f	UWZ089	3a(2)
SXC033	22b(2)	TRM694	5a	UXP076	13f
SYK198	3a(2)	TRS573	16d	UXY732	22a
SYT912	32	TUC170	3c	UYI186	14a
SZV560	7	TVC401	5h	UZB111	11
SZV937	23a(1)	TVW401	23b	VAB362	4e
TAN817	26	TZI483	24a	VAL370	16b

VAO903	22	WAX001	8	XEN697	21h
VCB913	23b(2)	WBN629	15i	XFM413	16c(2)
VCL722	6a(4)	WFO126	3a(1)	XFV157	21b
VEA276	3a(1)(b)	WHZ981	22c(1)	XGE711	3a
VEK050	30	WIA036	3i	XFV577	13a(1)
VEL397	16c	WIP515	16f	XKC653	14c
VFX585	6c(1)	WKC369	8b	XKE318	22c(2)
VHF443	14g	WMD660	32	XLP501	24c
VHN393	15a(3)	WMZ116	21a(1)	XMD614	6b(1)
VHX839	3b	WNZ014	6e	XMZ396	3a(3)
VIA317	7a	WOE265	21d(3)	XNP894	8a
VIA968	22b(2)	WOL818	23c	XNU111	3k
VLM316	33	WOZ179	23h	XPG955	15c
VMO634	15	WRO211	14c	XPO244	3d
VMP434	8b	WRO401	4a	XPS747	15c(1)
VNC427	14b	WSH089	3d	XPU941	6a
VNE300	31	WSH601	16c(2)	XPY021	14b
VNO554	5c	WSV767	6b	XQP528	7f
VOO553	14	WTO810	7b	XRM948	24c
VOP032	23a	WTR907	15a(3)	XRU400	15b
VOS667	11	WUA688	17	XTR401	4b
VOS733	8	WUO890	32	XUM141	7c
VPO720	8	WXA181	13a	XUO401	32
VQK665	13b	WXK124	10	XUO781	23a(2)
VTN137	5e	WXM735	24	XWU901	8b
VUO077	3h(1)	WXP266	5c(1)	XYF872	20
VUW845	3i	WXY831	3c	YAC333	4f
VWI863	3d	WZD082	13d	YBK903	7a
VWX048	4f	WZE714	8a	YCQ733	14c(2)
VWX501	21a	WZV317	33	YDG299	8b
VXP920	24b	XAB471	16b(2)	YDH461	6b
VXQ715	25	XAU231	13d	YDS378	3a(1)
VXY918	21c(2)	XCU534	4a	YEE873	8c
WAA083	4d	XCZ118	7c	YEH491	24e
WAH361	23a	XDA820	16b	YEP269	23e
WAI845	14h	XDG393	33	YER800	23b

YFV697	3a(4)	YVO103	22a(2)	ZIS241	6a(2)
YFZ161	2	YVW474	21b(2)	ZIS881	22e
YGH586	24a	YZG020	13e	ZIV792	3c
YHA279	33	YZG354	8c	ZMX660	14g
YIE068	5a	YZH307	4c	ZNO719	24a(1)
YIZ291	14d	YZT285	8d	ZNY354	12
YKE066	3e	YZV161	21g	ZPW867	3c(1)(a)
YKE094	4c	ZBE866	22	ZRI010	3g
YLA678	31	ZDC853	15	ZRX601	32
YMQ098	16a	ZDM802	14a	ZSH018	33
YNE379	4a(2)(a)	ZDS895	14c(2)	ZTO202	15g
YNR715	16b(1)	ZFX650	4c	ZVH823	21
YOF273	15a(1)	ZGH295	5b	ZVN004	4e
YRL729	5f	ZHA393	29	ZVP727	7d
YRV050	13e	ZHX819	21c	ZVW309	3b(1)
YSM963	22c	ZIB507	3a(1)	ZYI667	23c(1)
YST610	13b(1)	ZIR836	6	ZYN982	16c
YSV948	15c(2)				

Section 2—Code Names

Code names are permanently assigned to FRONTS, armies, divisions, regiments and battalions, but may be changed for the duration of a given operation. Subordinate elements of battalions not normally assigned a code name share the code name of their parent organization. Code names are usually single or dual words and are selected under no identifiable system. For security reasons, units are sometimes referred to by code name only. Code names may appear as part of the unit mailing address replacing the unit's code number. In identifying units by their code names, care must be taken to insure that the word(s) being analyzed refer to a unit. In the first subsection of this section, an alphabetical listing of unit associated code names with a paragraph reference from Appendix B has been prepared for intelligence training purposes. In the second, a listing of code names that are in use but whose unit association is unknown is provided for analysis.

Code names which have been unit associated:

Name	para	Name	para
AVTORUCHKA	21h	BOL'NOY ZUB	3b
BABUSHKA	23a(1)	BOL'SHAYA PTITSA	22a
BANNY LISTOK	19	BOL'SHOY TEATR	14a

Name	para	Name	para
BUBLIKI	16e	OCHI CHERNYE	3g
CHISTAYA VODA	3f	OSTRAYA BRITVA	21f
CHITATEL'SKIY BILET	22	PEPEL"NITSA	4c
DAL'NY VOSTOK	6c(1)	PERCHATKI	23d
DED MOROZ	4a(1)	PERSIDSKIY KOVER	16b
DETSKIY SAD	14e	PIONERSKIY LAGER'	8
DLINNY NOSA	4d	PISMENNIY STOL	13a(2)
DOROGAYA MASHINA	12	PLOKHOY SON	24
DOZHDEVIK	24b	PODBORODOK	16c(1)
DVOYURODNY BRAT	23e	POLOTENTSE	21
GALSTUK	24	POMIDOR	21a(1)
GLUBOKOYE OZERO	16a	PRAVAYA RUKA	16c
GLUPY DURAK	23b	PYATILETKA	21a
GOLUBOYE NEBO	6b	RAKOVINA	3a(1)
GORYACHII CHAY	14b	ROZOVAYA SHCHEKA	7f
GUBNAYA POMADA	21e	RUSSIKIY NAROD	24c(1)
INTERESNY ZHURNAL	23c	SAMOVAR	7
KARANDASH	6d	SERV VOLK	21c(1)
KARTOSHKI	2	SEVERNY POLYUS	6a(1)
KHOLODIL'NIK	6b(1)	SHASTLIVY RABOTNIK	15a
KHOLODNY YANVAR'	8a	SHELKOVY CHULOK	24a(1)
KHOROSHAYA NOVOST'	8e	SHOKOLAD	21c
KIRILITSA	21b(1)	SHPUL'NY KLAPAN	21b
KNIZHNY SHKAF	5c	SIL'NY DOZHD'	7e
KOMSOMOLETS	15b	SISNEYE MORYE	13c
KRASIVAYA KARTINA	13d	SKOVORODKA	6c
KRASNAYA ZVEZDA	4	SREDNYAYA SHKOLA	8c
MEDOVY MESYATS	6	SVOBODNOYE VREMYA	14c(1)
MOCHALKA	20	TEMNAYA NOCH'	23b(1)
MOKRYE GUBY	3	TEPLAYA VESNA	7a
MOLODOY CHELOVEK	23a	TOLSTYE OCHKI	5e
MORSKOY FLOT	21d(1)	TONKIY VOLOS	5a
MUZHSKOY KOSTYUM	26	TRUDNOYE DELO	23g
NASTOL'NAYA LAMPA	5b	TUPOY NOZH	4f
NOZHNITSY	25	UMNY MAL'CHIK	3d

Name	para	Name	para
VELIKIY OKTYABR"	6e	ZAPADNY VETER	4b
VESELAYA DEVUSHKA	15	ZELENAYA REKA	10
VINOGRADNY SOK	18	ZHARKIY DEN'	3e
VKUSNOYE YABLOKO	21d(2)	ZHELTYY DOM	13a
VYSOKAYA GORA	14	ZRITEL'NY ZAL	16d
ZAGRANITSA	22a		

Code names which have not been unit associated:

Name	Name	Name
AKADEMIYA NAUK	INOSTRANNY YAZYK	PERVOYE MAYA
ASPIRANTURA	INTURIST	PRIGOROD
BALALAYKA	ISKUSSTVO	PROFZOYUZ
BENZOKOLONKA	KAMENNY GOST'	RANNY POYEZD
BIBLIOTEKA	KATYUSHA	RAZDEVALKA
BORTPROVODNITSA	KLASSNAYA KOMNATA	RECHNOY VOKZAL
BOZHE MOY	KOLBASA	SAMOLET
DASSIRSHA	KOLOKOL'CHIK	SHIROKAYA VOLGA
DEN'ROZHDENIYA	KRESTNY KHOD	SHKOL'NAYA FORMA
DOMASHNAYA RABOTA	LETNIYE KANIKULY	SNEGUROCHKA
DOMOVOY	LYZHNY SPORT	SNEZHNAYA BURYA
DORBY VECHER	MERTVAYA YASHCHERITSA	STOYANKA TAKSI
ERMITAZH	MOTORNAYA LODKA	TROYKA
FORTOCHKA	NEVSKIY PORSPEKT	UCHITEL'NITSA
GARDEROB	NOVY GOD	UDOBNY STUL
GOSTINNY DVOR	OGURTSI	ZIMNY DVORETS
GRUZOVIK	OTKRYTKA	

Appendix D

INDEX OF UNITS

A cross reference (to Appendix B) index of all major units of the Central, Southern, and Northern FRONTS and Homeland forces is provided as a necessary portion of the data base needed in intelligence training. This base has been arranged in a normal alphabetical and numerical order. The abbreviations used may be found in Appendix I.

Name	para	Name	para
U/I AA Regt, 1 GTD	6a(5)	U/I Arty Regt, 38 GTD	21d(3)
U/I AA Regt, 30 GMRD	16c(2)	U/I Arty Regt, 39 MRD	22b(1)
U/I AA Regt, 31 GMRD	23a(2)	U/I Arty Regt, 41 GMRD	21c(3)
U/I AA Regt, 32 MRD	21a(2)	U/I Arty Regt, 46 MRD	23b(3)
U/I AA Regt, 39 MRD	22b(2)	U/I Arty Regt, 49 MRD	23c(3)
U/I AA Regt, 46 MRD	23b(3)	U/I Arty Regt, 50 TKD	23d(1)
U/I AA Regt, 58 GTD	22c(2)	U/I Arty Regt, 52 GTD	24a(2)
U/I AA Regt, 65 GTD	15c(2)	U/I Arty Regt, 57 TKD	23e(1)
U/I AA Regt, 73 MRD	14c(2)	U/I Arty Regt, 58 GTD	22c(2)
U/I AA Regt, 128 MRD	3a	U/I Arty Regt, 63 GTD	24c(2)
U/I AA Regt, 134 MRD	3c(1)	U/I Arty Regt, 65 GTD	15c(2)
ADE, 10 CAA	3h	U/I Arty Regt, 73 MRD	14c(2)
ADE, 24 CAA	23h	U/I Arty Regt, 128 MRD	3a
ADE, 46 GTA	7g	U/I Arty Regt, 134 MRD	3c(1)
U/I Arty Regt, 1 GTD	6a(5)	U/I Cml Bde C.F.	12
U/I Arty Regt, 2 GMRD	4a(5)	DAE, 1 GTD	6a(5)
U/I Arty Regt, 4 CAA	21f	DAE, 2 GMRD	4a(5)
U/I Arty Regt, 12 MRD	15a(3)	DAE, 12 MRD	15a(3)
U/I Arty Regt, 21 GTD	16a(1)	DAE, 21 GTD	16a(1)
U/I Arty Regt, 24 TKD	16B(1)	DAE, 24 TKD	16b(1)
U/I Arty Regt, 30 GMRD	16c(2)	DAE, 30 GMRD	16c(2)
U/I Arty Regt, 31 GMRD	23a(2)	DAE, 31 GMRD	23a(2)
U/I Arty Regt, 32 MRD	21a(2)	DAE, 32 MRD	21a(2)
U/I Arty Regt, 34 MRD	22a(2)	DAE, 34 MRD	22a(2)
U/I Arty Regt, 36 GMRD	21b(2)	DAE, 36 GMRD	21b(2)

Name	para	Name	para
DAE, 38 GTD	21d(3)	U/I SCUD SSM Bde, 4 CAA	21h
DAE, 39 MRD	22b(2)	U/I SCUD SSM Bde, 18 CAA	4
DAE, 41 GMRD	21c(3)	U/I SCUD SSM Bde, 20 TKA	16f
DAE, 46 MRD	23b(3)	U/I SCUD SSM Bde, 24 CAA	23
DAE, 49 MRD	23c(3)	U/I SCUD SSM Bde, 46 GTA	7f
DAE, 50 TKD	23d(1)	U/I SCUD SSM Bde, 51 GTA	8f
DAE, 52 GTD	24a(2)	U/I Sig Intcp Regt, N.F.	2
DAE, 57 TKD	23e(1)	U/I Sig Intcp Regt, S.F.	20
DAE, 58 GTD	22c(2)	U/I Sig Intcp Regt, 18 CAA	4
DAE, 63 GTD	24c(2)	1 Arty Regt	23a(2)
DAE, 65 GTD	15c(2)	1 GMTR	3b(1)
DAE, 73 MRD	14c(2)	1 GTD	6a
DAE, 128 MRD	3a(4)	1 SAM Bde (GANEF)	24
DAE, 134 MRD	3c(1)	2 Arty Regt	19
U/I Engr Bde, 10 CAA	3i	2 CAA	13
U/I Engr Bde, 20 TA	16	2 GMRD	4a
U/I Engr Bde, 23 CAA	15h	2 GMTR	4a(4)
U/I Engr Bde, 51 GTA	8g	2 MRR	3c
U/I Engr Bde, S.F.	20	2 Recon Regt	9
U/I GAINFUL SAM Regt, 7 GTA	5g	2 SAM Regt (GAINFUL)	2
U/I GAINFUL SAM Regt, 10 CAA	3h(2)	3 Ftr-Bmr Div	9
U/I GAINFUL SAM Regt, 23 CAA	15g	3 GMRR	4b
U/I GAINFUL SAM Regt, 24 CAA	23h	3 GTD	8a
U/I GAINFUL SAM Regt, 46 GTA	7g	3 MTR	3d
U/I GANEF SAM Bde, 4 CAA	21i	3 SAM Regt (GAINFUL)	32
U/I GANEF SAM Bde, 7 GTA	5g	3 SCUD SSM Bde	22f
U/I GANEF SAM Bde, 10 CAA	3h(1)	4 Abn Rfl Div	26
U/I GANEF SAM Bde, 23 CAA	15g	4 Arty Regt	11
U/I GANEF SAM Bde, 24 CAA	23h	4 CAA	21
U/I GANEF SAM Bde, 46 GTA	7g	4 Engr Bde	33
U/I Intel Regt, N.F.	2	4 Ftr-Bmr Div	25
U/I Intel Regt, C.F.	12	4 GMTR	6a(1)
U/I MT Regt, 4 CAA	21	4 Recon Regt	9
U/I MT Regt, 7 GTA	5	4 Sam Bde (GANEF)	20
U/I MT Regt, 10 CAA	3	5 Arty Regt	24a(2)

Name	para	Name	para
5 Ftr-Bmr Div	9	10 GMRD	33
5 GTD	33	10 GMTR	6a(2)
5 MRR	15a	10 MT Regt	16
5 Recon Regt	25	10 Recon Regt	17
5 SAM Regt (GAINFUL)	12	10 SAM Regt (SA-8)	32
5 SCALEBOARD SSM Bde	12	11 Air Army	9
6 Arty Regt	16e	11 CML Bde	2
6 Ftr-Bmr Div	17	11G Arty Regt	23g
6 GMRD	4b	11 GMRR	3b
6 SAM Regt (GAINFUL)	16	11 GTA	6
7 Abn Rfl Div	10	11 MT Regt	2
7 Abn Rfl Regt	10	11 Recon Regt	17
7 Arty Regt	4c	11 SAM Regt (GAINFUL)	15g
7 Ftr-Bmr Div	25	11 TKD	4d
7 GTA	5	11 Trans Sqdn	25
7 MT Regt	13	12 CAA	22
7 SAM Regt (GAINFUL)	32	12G Arty Regt	3a(4)
8 Engr Bde	2	12 MRD	15a
8 Ftr-Bmr Div	17	12 SAM Regt (SA-8)	32
8 GTA	24	12 TKD	6b
8 MRR	15a(1)	13G Arty Regt	8b
8 SAM Regt (GAINFUL)	32	13 Engr Bde	33
8 SAM Bde (GANEF)	14	13 MTR	3c
9 Arty Regt	5a	13 SAM Bde (GANEF)	12
9 Engr Bde	33	13 Trans Sqdn	9
9 GMRR	4a(1)	14 Abn Rfl Div	18
9 GMTR	5a	14 Arty Regt	15a
9 GTD	33	14 CAA	14
9 Recon Regt	25	14 Engr Regt (Ry Brg)	32
9 SAM Regt (GAINFUL)	32	14 SAM Regt (SA-8)	32
9 SCUD SSM Bde	15f	14 SCUD SSM Bde	6e
10 Arty Div	19	15 Air Army	17
10 Arty Regt	11	15 Arty Regt	4f
10G Arty Regt	21b(2)	15 Engr Bde	13
10 CAA	3	15 GMRD	5c

Name	para	Name	para
15 SAM Regt (GAINFUL)	32	20 GTD	33
15 SCUD SSM Bde	5f	20 MT Bde	20
15 Sig Intcp Regt	12	20 MTR	3d
15 TKD	4e	20 SAM Regt (SA-8)	32
15 Trans Sqdn	17	20 TKA	16
16 Abn Rfl Div	33	21 Arty Regt	19
16 Arty Div	27	21G Arty Regt	16B(1)
16 Arty Regt	31	21 Bmr Regt	9
16 GMRR	4a(2)	21 Engr Bde	33
16 GMTR	5c	21 GMRR	4b
16 MT Regt	14	21 GTD	16a
16 SAM Regt (SA-8)	32	21 Hel Regt	17
17 Air Army	25	21 MT Bde	12
17 Arty Regt	33	21 MTR	3d
17 GMTR	6a(3)	21 SAM Regt (GAINFUL)	32
17 GTD	33	21 SCUD SSM Bde	31
17 MT Regt	8	21 Sig Regt	5
17 SAM Regt (SA-8)	32	22 Abn Rfl Regt	26
17 SCUD SSM Bde	2	22 Arty Regt	13a
17 Sig Bde	20	22 Bmr Regt	25
18 CAA	4	22 CAA	33
18 Engr Regt (Ry Brg)	32	22 GMTR	5b
18 MTR	4e	22 MT Regt	24
18 MT Regt	23	22 SAM Regt (GAINFUL)	5g
18 SAM Regt (GAINFUL)	14	22 SCUD SSM Bde	23
18 SCUD SSM Bde	14g	23 Bmr Regt	17
19 Arty Regt	13e	23 CAA	15
19 GMRR	5c(1)	23 Engr Bde	6
19 GTA	33	23 GMRR	6a(4)
19 SAM Bde (GANEF)	21i	23 GMTR	16a
19 SCALEBOARD SSM Bde	20	23 SAM Regt (GAINFUL)	32
20 Abn Rfl Regt	10	23 SCUD SSM Bde	31
20 Cml Bde	20	24 Abn Rfl Regt	18
20 Engr Regt (Ry Brg)	32	24 CAA	23
20 GMRD	33	24G Arty Regt	7e

Name	para	Name	para
24 MT Regt	15	30 SAM Regt (GAINFUL)	32
24 SCALEBOARD SSM Bde	33	30 SCALEBOARD SSM Bde	33
24 TKD	16b	31 Arty Regt	11
25 Abn Rfl Regt	10	31 Engr Bde	7h
25 Arty Regt	24d	31 GMRD	23a
25 GTD	8b	31 SAM Regt (GAINFUL)	33
25 MT Regt	22	31 SCUD SSM Bde	31
25 SAM Regt (SA-8)	32	32 Arty Regt	11
25 SCUD SSM Bde	4	32 MRD	21a
26 Air Army	29	32 SCUD SSM Bde	12
26G Arty Regt	5b	33 Arty Regt	33
26 GMRR	7b	33 GMRD	33
26G HAB	31	33 GMRR	21b
26 MTR	4e	33 Sig Regt	15
26 SAM Bde (GANEF)	15g	33 SAM Regt (GAINFUL)	32
26 SCUD SSM Bde	31	33 SAM Bde (GANEF)	4
26 TKD	33	34 Abn Rfl Regt	26
27 SCALEBOARD SSM Bde	2	34G Arty Regt	- 33
27 Air Army	29	34 MRD	22a
27 Arty Regt	14a	34 SCUD SSM Bde	31
27G Arty Regt	19	35 GMRD	33
27 MT Regt	7	35 SAM Regt (SA-8)	33
27 SAM Regt (GAINFUL)	33	35 Sig Intcp Regt	6
28 Arty Regt	3d	36G Arty Regt	8a
28 MRR	3c	36 GMRD	21b
28 MTR	14b	36 SAM Regt (GAINFUL)	21i
28 SAM Regt (SA-8)	32	36 SCUD SSM Bde	3g
28 SCUD SSM Bde	24e	37 Abn Rfl Regt	18
29 Arty Regt	32	37 Arty Div	11
29 SCUD SSM Bde	31	37 HAB	31
30 Air Army	29	37 MRL Bn	3c(1)(b)
30 Arty Regt	19	37 SAM Regt (GAINFUL)	33
30 Arty Regt	22e	37 SCALEBOARD SSM Bde	33
30 GMRD	16c	37 Sig Regt	3
30 GMTR	b-4b	37 TKA	29

Name	para	Name	para
38 GTD	21d	46 SAM Regt (GAINFUL)	32
38 MTR	6b	47 Arty Regt	13b
39 Arty Regt	22b(2)	47 SAM Reg (SA-8)	32
39G Arty Regt	15e	47 TKD	13d
39 MRD	22b	48G Arty Regt	21g
39 MRR	21a	48 GMRR	3b
39 SAM Regt (GAINFUL)	32	48 MED Regt	7
40 GTD	33	48 SAM Bde (GANEF)	33
40 MRR	3a(1)	48 SCUD SSM Bde	13f
40 SAM Bde (GANEF)	33	49 Arty Regt	32
41 Arty Regt	32	49 Engr Bde	12
41 GMRD	21c	49 GMTR	8b
41 GMRR	21b	49 MRD	23c
41 SAM Regt (SA-8)	32	49 SAM Regt (GAINFUL)	32
41 SCALEBOARD SSM Bde	31	49 SCALEBOARD SSM Bde	31
42 Arty Regt	32	50 Abn Rfl Regt	18
42 GMRD	33	50 TKD	23d
42 SAM Regt (SA-8)	33	51 Abn Rfl Div	30
43 Arty Regt	7b	51 Arty Regt	3f
43 Engr Bde	4	51 GTA	8
43 MRD	30	51 MRR	3a
44G Arty Regt	8e	51 SAM Regt (GAINFUL)	32
44 GMTR	16a	52 Arty Regt	15b
44 MRD	13a	52 GTD	24a
44 MRR	21a	52 MRR	21a(1)
44 SCALEBOARD SSM Bde	31	52 MTR	6b(1)
45 Hel Regt	25	52 SAM Bde (GANEF)	31
45 SAM Bde (GANEF)	5g	53 Arty Regt	32
45 SCALEBOARD SSM Bde	31	53 MED Bde	12
45 Sig Regt	24	53 MTR	16b
46G Arty Div	30	53 SAM Regt (SA-8)	32
46 GTA	7	53 SCALEBOARD SSM Bde	31
46 HAB	31	54 GMRD	8c
46 MRD	23b	54 HAB	31
46 MRR	3a(2)	54 SAM Bde (GANEF)	31

Name	para	Name	para
54 Sig Regt	23	64 GMRD	14a
55 HAB	31	64 GMRR	24a
55 GMRR	7a	64 MED Bde	20
55 GMTR	24a(1)	65 GTD	15c
55 MRD	30	65 SAM Bde (GANEF)	33
55 SAM Regt (GAINFUL)	32	66G HAB	31
55 SCALEBOARD SSM Bde	31	66 MRD	30
56 MRD	13b	66 MRR	22b
56 SAM Bde (GANEF)	31	66 SAM Bde (GANEF)	33
57 HAB	31	67G Arty Div	33
57 SAM Bde (GANEF)	31	67 Arty Regt	32
57 TKD	23e	67 MRD	14b
58 GTD	22c	67 MRR	13a(1)
58 HAB	31	67 SCUD SSM Bde	20
58 MED Regt	5	68 GMRR	4c
58 SAM Regt (SA-8)	32	69 MED Regt	24
58 Sig Regt	16	69 MRR	13b(1)
59 GMRR	23a(1)	69 SAM Regt (SA-8)	32
59 HAB	33	70 Abn Rfl Div	30
59 SAM Regt (GAINFUL)	32	70 Arty Div	30
60 Arty Div	30	70 Arty Regt	32
60 Arty Regt	5e	70 MRR	14b
60 SAM Bde (GANEF)	31	70 SAM Bde (GANEF)	31
61 GTD	24b	72 GTD	7a
61 Engr Bde	23	72 HAB	31
61 MRD	33	72 SCUD SSM Bde	33
61 SAM Regt (SA-8)	32	73 MED Regt	22
62 Arty Div	33	73 MRD	14c
62 GMRD	4c	73 MRR	22a
62 MRR	22a	74 MRD	33
62 SCUD SSM Bde	33	74 Pon Regt	14d
63 Arty Regt	4b	75G Arty Regt	24c(2)
63 GTD	24c	75 GMRR	22c
64 Arty Regt	7c	75 GMTR	8a
64 Engr Bde	5h	75 GTD	33

Name	para	Name	para
76 Arty Regt	32	89 Arty Regt	7a
76 CAA	29	89 GMRD	30
76 GMRD	33	89 Hel Regt	25
76 Hel Regt	17	89 Pon Regt	15d
77 HAB	31	90G HAB	31
78 Arty Regt	5c	90 MED Bde	2
78 GTD	33	90 MRD	33
78 MRR	13b	91 Arty Regt	4a(5)
79 Arty Regt	33	91 GMTR	8b
79 GMRR	5c	91 GTA	29
79 GTD	7b	91 MRR	7c
80 Arty Regt	32	92 MTR	16d
80 MRR	13a(2)	93 Arty Regt	21a(2)
80 TKD	3d	94 CAA	29
81 Hel Regt	9	94 GMTR	7b
81 MTR	15a(2)	94 MRR	14b
82 MED Regt	21	95 GMRD	30
82G HAB	31	95 GMTR	14a
82 MRR	15a	96 MRR	22b
83 Arty Regt	3b	96 MTR	4d
83 GTD	33	97 G Arty Regt	6c
83 Hel Regt	9	98 CAA	29
83 Pon Regt	14e	98 GMTR	7b
84 GMRD	30	98 MED Regt	23
84 GMRR	23a	99 GMTR	4c
84 SAM Bde (GANEF)	31	100 Abn Rfl Regt	26
85 Arty Regt	6b	100 MRD	30
85 GMRR	4c	100 Pon Regt	5d
85 MRD	33	101 GMRD	33
86 Arty Regt	23b(3)	101 MRR	3c
86 MED Regt	8	102 Arty Regt	14c(2)
86 MRR	22a(1)	103 GMTR	7a
87 GMRD	30	103 MRR	3d
87 GMTR	23a	104 MRD	7c
88 Abn Rfl Div	30	104 MTR	4d

Name	para	Name	para
105 GMTR	5a	130 GMTR	22c(1)
106 GMTR	7a	130 GTD	5a
106 MRD	33	131 MTR	23b(2)
107 Pon Regt	4	132 GMRR	21b
108G Arty Regt	22a(2)	133 GMRR	21c
109 GMTR	6c	133 GMTR	8a
110 Arty Regt	23f	134 GTD	5b
110 GMRR	8c	134 MRD	3c
111 GMRR	24b	134 MTR	16b
111 GMTR	5b	135 MRR	6b
111 MRD	30	136 GMRR	8c
114 MRR	7c	136 MRD	15b
114 Pon Regt	13	136 MTR	16b
115 GMTR	24a	137 MRR	4e
116 GMRD	30	137 MTR	13b(2)
116 GMTR	6c(1)	138 MTR	13d
116 MRR	22b(1)	139 Pon Regt	22d
117 MTR	4d	142 GMRR	4b
118 GMRR	24c	142 Pon Regt	23
119 Pon Regt	8d	143 GMTR	8a
120 GMRR	23a	144 MRR	23b(1)
121 MRR	7c	145 MTR	13a(3)
121 Pon Regt	7d	146 MRR	23b
122 Pon Regt	21e	146 Pon Regt	3e
124 MRD	30	147 GMTR	15c(1)
125 GTD	6c	148 GMRD	30
126 GMRR	8b	148 GMRR	21c
127 GMRR	21c(1)	150 MRR	23b
127 MRD	30	151 GMRR	16a
127 MTR	13c	152 GMRR	15c
128 GMTR	15c	152 GMTR	3a(3)
128 MRD	3a	153 MRR	23e
129 MTR	14c(1)	154 GMTR	15c
130 GMRD	3b	155 MRR	16b
130 GMRR	4c	156 GMRR	16c(1)

Name	para	Name	para
156 MTR	23e	185 GMRR	4a(3)
160 MTR	23c(2)	185 GMTR	21b(1)
161 GMRR	16c	186 GMRR	6c
161 MTR	23e	186 GMTR	21d
165 GMRR	21d	188 GMRR	14a
166 MTR	15b	188 GMTR	24c(1)
167 MTR	23e	189 GMTR	22c
168 MRR	23c	190 GMTR	21d(2)
168 MTR	23d	191 GMRR	3b
171 MTR	23d	193 MRR	13c
172 MRR	23c(1)	196 GMTR	24b
175 MTR	23d	197 GMRR	14a
177 MRR	23c	199 GMTR	21c(2)
180 MTR	13d	199 MRR	14c
181 MRR	14c	200 GMRR	14a
181 MTR	21a	202 MRR	15b
182 MTR	21d(1)	204 MRR	15b
183 MRR	13d	635 Arty Regt	6d

Appendix E

PERSONALITIES

This appendix contains an alphabetical listing with a paragraph reference to Appendix B of those opposing forces officers that are currently identified:

Name	para	Name	para
ABASHIN, I.	23e(1)	ALEKSEYEV, C.	14a
ABDULAYEV, P.	21b(1)	ALEXEIEV, V.	3b
ABICH, R.	16	ALFONIN, A.	16a
ABROMCHUK, P.	13d	ALIFANOV, G.	7e
ADASHEV, P.	4f	ALIFANOV, L.	6b(2)
ADASHEVSKIY, P.	4b	ALIKHANOV, V.	4e
AFANAS'YEV, O.	23	ALYAVYEV, K.	5a
AFINOGENOV, B.	5a	AMRAMOVICH, T.	4e
AGAPOV, L.	4a(3)(a)	ANASHKIN, N.	13
AGISHEV, N.	14a	ANDREYEV, B.	21c
AGISHEV, V.	7c	ANDREYEV, Z.	5g
AGOSHKOV, T.	6a(3)	ANDRIANOV, D.	6c
AKHTYRSKIY, B.	8c	ANIKANOV, R.	23b(2)
AKOVENKO, B.	6b	ANIKANOV, V.	19
AKSAKOV, S.	2	ANNENSKY, L.	6c
AKSELROD, F.	6b	ANOKHIN, B.	22
AKSEN, B.	14c(2)	ANOSOV, L.	6d
AKSENENKO, F.	2	ANTOKOLSHI, G.	3b(1)
AKSENOV, Yu.	3h(1)	ANTONENKO, A.	33
AKULICH, F.	5g	ANTONENKO, N.	22d
ALATYRTSEV, R.	23b	ANTONYUK, M.	5b
ALEKSEYEV, N.	4	ANTROPOV, T.	6e
ALCHEVSKY, P.	6b	ANTU'YEV, A.	4c
ALDANOV, B.	3a(1)	ANYUKHIN, A.	23c(1)
ALEKHIN, Ya.	3a(1)(b)	APRAKSIN, T.	3e
ALEKSYEYEV, B.	8e	APRAXIN, H.	4a

Name	para	Name	para
APUKHTIN, M.	4a(3)(b)	BALMASHEV, R.	20
ARBUZOV, K.	13a(2)	BALYKOV, E.	22c(2)
ARENSKI, C.	4a(2)	BALYKO, Z.	13d
ARKHOVSKIY, B.	7a	BANNYKH, Ye.	5c
ARTEMKIN, I.	16c	BARABANOV, E.	23b(3)
ARTYBASHEV, I.	4a(3)	BARANOV, F.	23c(1)
ASAFYEV, K.	7c	BARANOV, Yu.	3i
ASLYUK, K.	14c(1)	BARANSKY, E.	21
ASTAKOV, F.	26	BARATYNSKY, P.	21
ASTRATOV, V.	5e	BARASHKIN, Y.	3a(1)(a)
AVASASHVILI, D.	23c(3)	BARCHENKOV, P.	23b
AVERBAKH, P.	7a	BARONOV, C.	8d
AVERBURG, G.	8b	BASHIROV, A.	21c(2)
AVERESCU, D.	4e	BASHIROV, V.	22b(1)
AZARAROV, C.	3	BASKAKOV, B.	14c(3)
AZBUKIN, S.	4b	BASKOV, P.	23c
AZHAYEV, M.	7a	BASMANOV, A.	4a(2)(b)
AZHAYEV, S.	7d	BATURINTSEV, I.	24a(1)
BABENKO, D.	15c(1)	BATUSHEV, K.	6a(1)
BABIY, P.	7	BATYUSHKOV, G.	22a
BABUKHIN, T.	13b(2)	BAUMAN, I.	13f
BABUSHKIN, P.	14b	BAVER, N.	4a
BAGIROV, C.	17	BAYUSOV, D.	13
BAGRAMYAN, K.	14e	BAZHANOV, R.	23d(2)
BAGRITSKY, R.	15c(3)	BAZYLEV, E.	21c(3)
BAGUTSKIY, C.	8c	BEDZHENYAN, D.	24b
BAKHAREV, N.	15a	BEDZHANYAN, L.	31
BAKHMETEFF, C.	16	BEKHTEREV, L.	16a
BAKHURIN, T.	16a	BELETSKIY, P.	18
BAKST, H.	33	BELIKOV, V.	21e
BAKUNIN, N.	16c	BELOPOLSKY, K.	16c(1)
BALABAYKIN, R.	21d(3)	BELOTELOV, K.	23b
BALANDIN, A.	16d	BELOUZOV, P.	17
BALASHOV, B.	14a	BELOV, C.	22e
BALAZKI, L.	33	BELOV, M.	3a

Name	para	Name	para
BELOZEROV, N.	21a	BOGOLEPOV, F.	32
BELUKOZUV, P.	17	BOGOMOLETS, B.	32
BELYARMINOV, I.	6a(4)	BOLDANOV, V.	6d
BELYAYEV, K.	21c	BOLDENKOV, F.	23a(2)
BELYAYEV, V.	16c(2)	BOLDOV, V.	16b
BELYSHEV, I.	21c(1)	BOLOGOV, R. B.	3a(1)
BERDYAYEV, W.	21a(2)	BOLOTNIKOV, S.	25
BEREZKO, V.	4a(2)(b)	BOLOTOV, S.	4c
BERIA, L.	4b	BORATYNSKY, E.	21d(3)
BERIKOV, F.	32	BORETSKY, P.	25
BESPALOV, C.	3h(1)	BORISOV, N.	14
BESPALOV, Y. U.	24d	BORISYUK, G.	21c(2)
BESTUZHEV, L.	23a	BORODINOV, O.	26
BETEKHTIN, C.	23d	BORTNYANSKY, D.	30
BETIKHER, Ya.	13a(1)	BORZYKH, M.	3i
BETSKOY, P.	23e	BOTIN, D.	18
BEZGOGKOV, B.	21e	BOTIN, F.	21c(3)
BEZNOS, C.	16b	BOTIN, P.	3a
BEZYMENSKY, I.	24a(1)	BOTVINNIK, L.	31
BILEYSHIN, P.	21a(2)	BOVVAN, P.	24
BILIBINOV, T.	24c	BOYECHO, M.	3g
BIRYUKOV, I.	33	BOYKO, E.	13a
BLAGODARNYY, L.	7g	BRAN'KOV, S.	15a(2)
BLAGONRAVOV, B.	4	BREISACH, F.	15
BLAZHUK, G.	3a(3)	BRESLAVETS, B.	2
BLINOV, C.	21b(1)	BRESLAVSKIY, B.	13d
BLINOV, G.	8	BRESLAVSKIY, Ya.	7g
BLIZNYUK, M.	16c	BRITSKE, W.	15g
BLOSHENKO, C.	24	BRONEVICH, A.	4c
BOBORYKIN, K.	30	BRONSKY, R.	7c
BOCHAROV, A.	16c	BRUSOV, Z.	6a(1)
BOCHAROV, C.	21d(2)	BRYKIN, O.	4a(6)
BOCHVAR, P.	31	BRYLEV, W.	33
BOGDANOV, E.	5b	BUBNOV, N.	4a(4)
BOGDANOV, N.	15a(4)	BUCHINSKIY, O.	29

Name	para
BUDA, V.	15e
BUDNEY, Y.	5c
BUDNOV, K.	21g
BUDSHANY, B.	22b(1)
BUDYONNY, D.	7g
BUKLIKOV, G.	22c(1)
BUKTIN, I.	24b
BULAKOV, P.	6a(4)
BULGAKOV, R.	10
BULYGIN, M.	13b
BUNEVICH, M.	5c
BUROV, E.	8e
BURTSEV, I.	13a
BUSHUYEV, N.	13a(2)
BUTURLIN, S.	13a(1)
BUYALSKY, L.	13a(2)
BUYANOV, P.	13a
BUYNEVICH, Ya.	23a
BUZANOV, T.	23b(2)
CHABANOV, L.	4a(1)(b)
CHAGIN, L.	4b
CHAGIN, S.	3f(2)
CHALGANOV, C.	33
CHEKANOV, Ya.	12
CHERKAS, O.	14c(2)
CHERKASOV, V.	21
CHERNIK, B.	5d
CHERNOMORTSEV, F.	23e
CHERNYSHEVSKIY, V.	14a
CHERVYAKOV, V.	4c
CHESLAVSKIY, R.	22c(2)
CHETVERTKOV, B.	3
CHETYRIKIN, A.	3b(1)
CHIKAREV, B.	24d
CHIRVA, P.	8g

Name	para
CHIZHIKOV, A.	3d
CHUGURYAYEV, F.	14b
CHURLIN, K.	23b
DABAYEV, B.	30
DANILIN, G.	6c(1)
DATKIN, E.	3b
DAVIDENKO, O.	3a(2)
DAVKETOV, C.	15a
DAVYDOV, V.	21c(1)
DEDOV, B.	25
DEGTYARENKO, M.	24b
DEMIDOV, C.	2
DEMIDOV, E.	4c
DENIDOV, Ya.	5e
DENISENKO, B.	14
DENISOV, E.	16a(2)
DENISOV, L.	14c(2)
DERKACH, V.	3e
DERYABIN, Ya.	21c(1)
DIDENKO, C.	15c(3)
DIMITRENKO, C.	14b
DMITRIYEV, S.	17
DOBRYDEN, Yu.	8f
DOKUCHAYEV, B.	13c
DOLGIKH, E.	23a
DOLGIYER, N.	13a
DOLGOV, C.	16c
DOROSHENKO, V.	5b
DRAGIN, V.	6e
DRANNIKOV, C.	33
DRAYAGIN, V.	13a
DREVIN, G.	14a
DUBOV, V.	14c(1)
DULEPOV, A.	3b
DUKACHEV, C.	21c(3)

Name	para	Name	para
DUNAYEV, D.	22	GAYDUKOV, Ya.	14a
DUSHENOV, N.	22b(2)	GEMENOV, I.	16b(1)
DUTCHAK, E.	13	GENTSARYUK, D.	5
DYADIN, Q.	3c(2)	GIGOR'YANTS, D.	13b(1)
DYBENKO, V.	15a	GINZBURSKIY, M.	8
DZAHROYEV, N.	29	GITALOV, I.	6d
DZERZHINSKIY, I.	15c	GLAZKOV, F.	7
EPERMANIS, Yu.	14c(2)	GLAZUNOV, A.	7f
ERENBURG, V.	7a	GLEBOV, P.	3c
FATAYEV, D.	15i	GLUKH, G.	4a(1)(a)
FAYENOV, I.	5c	GLUKHOVSKIR, B.	13a(1)
FEDOTOV, M.	22d	GNATCHENKO, I.	6c
FEDRORIN, C.	23b(2)	GOL'DBERG, Yu.	6(5)
FILATOV, N.	4a(2)(b)	GOL'DSHTEYN, P.	7b
FILIPP, I.	3c(1)(a)	GOLOVANOV, P.	3d
FILIPPOVSKIY, C.	22a(2)	GOLOVCHENKO, R.	3c
FOKIN, C.	15c	GOLOVKO, A.	21e
FOMENKO, S.	8f	GOL'TSMAN, Yu.	3f(1)
FOMICHEV, B.	4	GOLUBCHIK, B.	23f
FRANGULOV, V.	8a	GOLUBETS, I.	13d
FREYGOT, S.	9	GOLUBEV, Z.	6a
FREYLIKH, A.	33	GOLUBIN, C.	22c(1)
FROLOV, B.	27	GONCHAROV, E.	22e
FROLOV, N.	4f	GONIODSKIY, A.	23a
GABOV, Z.	3	GORBATOV, L.	31
GADZHIYEV, E.	15a(2)	GORBICH, S.	4c
GALKIN, M.	6a(4)	GORBUNOV, I.	4d
GAPONENKO, C.	6c	GORBUNOV, R.	12
GARNOV, W.	22a	GORELIK, Z.	14f
GASKAROV, D.	14b	GOREV, Ye.	5d
GASTELLO, I.	23d(1)	GOR'KIY, G.	13a(2)
GATSOLAYEV, D.	13b	GOROBETS, F.	23d
GATS'KO, E.	31	GORODNIY, F.	21d(3)
GATYCH, S.	4a(1)	GOROSHKO, M.	7a
GAYDAR, E.	15e	GORSHKOV, P.	5c

Name	para
GORYNIN, N.	5b
GORYUNOV, F.	33
GOSHIY, T.	7h
GOSTEV, C.	13e(1)
GRABER, M.	6a(5)
GRACHEV, Ya.	22c
GREBENNIKOV, V.	3a
GRECHKO, S.	5f
GREGORVICH	3c
GRIBANOV, F.	21b(1)
GRIGOR'YEV, B.	22
GRIGOR'YEV, C.	23f
GRINKEVICH, R.	23b(3)
GRISHIN, B.	23b(3)
GRISHIN, Yu.	7f
GRISHKO, N.	6c(1)
GROMOV, B.	15c(2)
GROMOZDOV, A.	3f(1)
GROMYSHEV, P.	23c
GROZDOV, I.	5d
GRUNTSOV, G.	15c(3)
GRYAZNOV, W.	24e
GUBIN, V.	19
GUDZ', E.	15a
GUGIN, N.	3g
GU KOV, B.	5c
GULIN, Y.	5g
GURIN, I.	3c(1)
GUROV, R.	4a(1)
GURZHIY, K.	18
GUSEV, H.	6a(2)
GUSEYNOV, A.	23a(1)
GUTSU, P.	33
IGNATENKOV, B.	5a
IGNATOV, V.	14c

Name	para
IGNAT'YEV, S.	3d
IGNATYUK, P.	8h
IL'CHUK, E.	22b(2)
IL'IN, B.	13
ILINKOV, M.	8b
IL'INOV, A.	22
IL'YASHA, I.	24b
INOZEMLSEV, G.	6a(1)
ISHCHENCO, A.	3c(1)(a)
IVANIN, C.	2
IVANOV, M.	3c(2)
IVOLGIN, Yu.	11
KABANOV, E.	22b
KALACHNIKOV, G.	5b
KALYAKIN, M.	23g
KAMYSHANOV, I.	21b(2)
KANASHKIN, W.	24a
KANUPER, E.	15c(1)
KAPBA, M.	33
KARAVAYTSEV, C.	21f
KARBYSHEV, O.	23g
KARELIN, P.	15h
KARNOZOV, A.	3a(1)(a)
KARPETS, R.	13
KARPOV, E.	5d
KARTSHOV, G.	7f
KASHIN, N.	6c(2)
KASHURNIKOV, T.	24a(1)
KATRICH, F.	7a
KATYS, A.	25
KAZAKOV, Yu.	3f(2)
KAZANTSEV, I.	8a
KAZINETS, E.	7d
KAZ'MIN, C.	15a(5)
KAZMIRCHUK, V.	15b

Name	para
KEKALO, V.	15a
KHANIN, A.	22b
KHARIN, D.	3b
KHARLAMOV, L.	14a
KHARPAC, E.	23a(2)
KHECHUMYAN, N.	24e
KHIL'KEVICH, K.	24b
KHMELEV, V.	3b
KHOBOTOV, A.	3b
KHOBOTOV, A.	15b
KHOLODOV, M.	16c(1)
KHOLODOV, H.	6
KHOLOPOV,	12
KHOMYLEV, L.	7e
KHRAPONOV, F.	22
KHROBOSTOV, E.	5c(1)
KHUTIRNENKO, A.	9
KHVILON, Ya.	8c
KICHAYEV, A.	8b
KIKNADZE, I.	7c
KIRILYUK, P.	23
KIROV, K.	6a(2)
KISELEV, N.	23f
KISELEV, Y.	3c
KISLYAKOV, P.	5b
KITAYEV, N.	15a(3)
KIYEV, C.	2
KLEYMENOV, V.	3a(1)
KLIMENKO, D.	8h
KLIMKOVICH, P.	3a
KLOCHKOV, M.	6a(2)
KLUYUYEV, A.	24c(1)
KOBA, E.	14a
KOBSEV, V.	14c
KOCHETOV, G.	32

Name	para
KODIN, N.	3c
KOGRUSHEV, B.	13d
KOLESNIKOV, B.	21h
KOLOBOV, A.	32
KOLOMIYTSEV, O.	24a(2)
KOL'TSOV, B.	21j
KOLUBKOV, S.	4b
KOMAROV, A.	20
KOMAROV, C.	21c
KOMISARIK, C.	32
KOMISSAROV, B.	14
KONEV, H.	16b(1)
KONRAT'YEV, I.	21d(3)
KONTRULE, O.	23a(1)
KOPETSKIY, N.	3b(2)
KOPYLOV, A.	3f(2)
KORABLEV, N.	16b
KORENEV, M.	21f
KORGOD, V.	14e
KORICHIN, V.	7a
KORKIN, K.	5
KORNEV, L.	20
KORNIYENKO, D.	13f
KOROBKOV, L.	5c(2)
KORZHOV, I.	5f
KOSAREV, M.	3c
KOSHLAKOV, N.	8d
KOSLOV, B.	5c(2)
KOSMATOV, Ya.	8b
KOSOV, K.	19
KOSTIKOV, B.	23e(1)
KOSTIN, M.	21c(3)
KOSTYANKO, T.	6a(3)
KOSTYUCHENKO, C.	3c(1)(a)
KOSTYUKOV, N.	16

Name	para	Name	para
KOSYREV, E.	33	KURASHOV, Ye.	3d
KOTA, A.	4b	KURCHAK, K.	22f
KOTOVICH, C.	21i	KUREPKO, O.	21b(2)
KOTOV, M.	21b	KURGANSKIY, K.	23e(1)
KOVACHEVICH, V.	6	KURKOV, K.	16a(2)
KOVALEV, I.	16d	KUSHCH, V.	16a(1)
KOVSHAR, O.	21f	KUSTENKO, A.	12
KOZHAYEV, V.	3i	KUSTOV, E.	13b
KOZHIN, D.	16a(1)	KUT'INOV, F.	21c
KOZHIN, G.	21a(2)	KUTS, P.	23
KOZHUKHOV, V.	22a(3)	KUTSENKO, B.	8g
KOZLOV, F.	22e	KUZ'MENKO, T.	33
KOZLOV, M.	22b(2)	KUZ'MIN, R.	15i
KRABCHUN, A.	23b(1)	KUZNETSOV, M.	13a(2)
KRAVCHKO, N.	23b(3)	KUZOV, E.	7b
KRAVCHUK, A.	13b	KUZOVLEV, H.	21a(1)
KRAVETS, A.	7f	LADIN, C.	4a(6)
KRAYZ, M.	33	LADIS, I.	4a(4)
KRETOV, V.	14c	LAGOSYUK, IL	33
KRIVTSOV, L.	23g	LALETIN, B.	22a(1)
KRUGLYAK, K.	6c	LARIN, A.	4a
KRUTINSHIY, A.	13d	LATUKHIN, R.	4b
KRUT'KO, S.	8b	LAVRINEKO, A.	12
KRYCHKOV, D.	5b	LAZAREV, D.	7b
KRYKOV, G.	10	LEONOV, I.	13b
KRYUCHKOV, O.	4	LESHCHINSKIY, B. P.	3a(4)
KUCHEROV, H.	21c(2)	LEVCHENKO, K.	14h
KUDRYAKOV, L.	21a(1)	LEVIN, B.	13a
KUDRYASHOV, A.	23d	LEVISHIN, A.	8c
KUKLIN, B.	4b	LEVITAN, A.	13
KUKUSHKIN, I.	23h	LEVITSKIY, A.	3j
KULESHOV, Z.	6d	LIKASHKOV, Ya.	22a(3)
KULIKOV, G.	6	LIKHACHEV, I.	3b
KULIKOV, O.	16c	LIPATOV, F.	15b
KUPAVA, N.	21b(1)	LIVDAN, E.	15d

Name	para	Name	para
LOBANOV, Z.	14d	MARGELOV, N.	5a
LOBKO, U.	6	MARKOV, A.	4a(1)(b)
LOBOV, H.	13a	MARYUTIN, V.	8e
LOYKE, V.	4a(1)(a)	MASAGUTOV, Z.	5a
LUCHKO, C.	7a	MASALOV, E.	6b
LUKAN, I.	25	MASLOV, N.	7b
LUKASH, I.	5c(2)	MATAKOV, I.	22c(2)
LUKIN, A.	21b	MATROSOV, H.	6b(1)
LUKMANOV, N.	7d	MATVEYEV, D.	19
LYBIVYY, A.	22c(1)	MATVEYKOV, A.	23d
LYKHMUS, B.	13a(2)	MEDEDEV, E.	7c
LYSENKO, L.	16a(2)	MEDNIKOV, N.	4a(5)
MAGKAYEV, R.	4b	MELESHCHENKO, B.	7a
MAGRITSKIY, P.	30	MELIKHOV, C.	16b(2)
MAIYEVSKIY, T.	5a	MEL'NIKOV, A.	8a
MAKAREVICH, O.	7e	MEL'NIKOV, C.	22a(1)
MAKAROV, B.	16b(1)	MEL'NIK, S.	21d(1)
MAKAROV, B.	7f	MEL'SHIKOV, A.	23b(3)
MAKEYEV, G.	6a(2)	MERKIN, I.	33
MAKEYEV, N.	7c	MERKOYSKIY, I.	21a
MAKHAIN, P.	2	MERKUSHOV, R.	20
MALANCHEV, Yu.	6	MIGUNOV, M.	4c
MALIK, B.	6c	MIGUR, S.	5e
MALIN, F.	22c	MIKHAYLOV, C.	23a(2)
MALINKIN, V.	4a(3)(a)	MIKHAYLOV, K.	23d
MALKOV, A.	33	MIKHAYLOV, Y.	3a(3)
MAL'TSEV, A.	22c	MIKHEYEV, P.	32
MALYUTIN, A.	8c	MIKHUNUSHHEV, C.	13c
MALYY, C.	16c(2)	MIKUTSKIY, L.	7b
MAMEDOV, S.	13b(1)	MILEKO, B.	21g
MAMET, A.	4a(1)(a)	MILEKO, C.	15f
MANDRUKOVICH, V.	6b	MILKOV, Y.	3a(1)(a)
MANEVICH, O.	4d	MIRONOV, F.	16f
MANGUSHEV, I.	13c	MISHIN, E.	21e
MANTULO, G.	22b(1)	MISHIN, M.	15b

Name	para	Name	para
MNOGIN, V.	6a(3)	NIZOV, D.	7
MOCHALOV, Ya.	13b	NOLKOV, G.	8f
MOCHENKOV, G.	15c(2)	NOVICHKOV, P.	16b(2)
MOL'KOV, D.	6a	NOVIKOV, F.	21d(1)
MORDKOVICH, A.	5b	NOVIKOV, I.	23d(2)
MOROZOV, Z.	3f	NOVITSKIY, B.	7d
MOSLALYUK, B.	24	NOVODVORETS, E.	8b
MOSTOVYY, I.	15d	OBLACHKOV, F.	4a(5)
MOTORICHEV, F.	22f	OGLANOV, H.	3a(3)
MOVCHAN, I.	7f	OKHOTNIKOV, E.	6a(2)
MOZOLIN, Yu.	4a(3)(b)	OKHRIMENKO, B.	3a
MUKAN, A.	14c(2)	OKRUZHNOV, I.	3a(1)(a)
MUKHAMEDOV, M.	23c(3)	OKSIN, L.	15g
MURATOV, G.	6a	OLEYNIKOV, A.	6a(1)
MURZIN, K.	23d(2)	OL'KHIN, C.	16e
MYACHIN, E.	6	OMEL'CHUK, V.	13c
MYASNIKOV, I.	14c(2)	ORECHNIKOV, N.	22e
MYRZA, H.	32	OREKHOV, b.	22b
MYSKOV, C.	5b	ORLOV, E.	12
NASTECHIK, U.	12	ORLOV, V.	4b
NAUMOV, L.	5a	OSADCHIY, Ya	20
NAYDENKO, U.	24c	OSDCHENKO, V.	8a
NECHATEV, I.	24c(1)	OSHKIN, G.	4a(3)(a)
NEDBAY, Ya.	4a(6)	OSIN, D.	33
NEMANOV, E.	6a	OVCHARENKO, M.	24c(2)
NESTEROV, P.	23a(1)	OVCHINNIKOV, F.	7i
NETSHOV, Yu.	15a(4)	OVSYANNIKOV, C.	31
NEVSKIY, D.	25	OZHESKO, K.	13c
NIKITENKO, I.	23c(1)	PAL'TSEV, E.	21d(2)
NIKITENKO, Ya.	24c	PANIN, Ya.	14g
NIKITIN, R.	15a(1)	PANKOV, Z.	5c
NIKITIN, V.	27	PANKRATOV, A.	22a(2)
NIKOLAYEV, H.	16f	PANKRATOV, B.	3c(1)(b)
NIKOLAYEVSKIY, K.	24a	PARETSKIY, M.	15a
NILOV, K.	3h(2)	PARKHOMENKO, B.	23c

Name	para	Name	para
PASHCHENKO, M.	23	POLYAKOV, M.	13b
PASSOV, K. P.	3a	POLYARNYY, C.	16b
PASYNKOV, M.	33	PONOMAREV, F.	3a(1)(a)
PATRIN, P.	2	POPENKO, R.	23d(1)
PAUTOV, E.	21	POPOV, C.	6a(5)
PAVLOV, B.	15c	POPOV, M.	21c(2)
PAVLOV, V.	24b	POROKHIN, P.	3
PECHERENKO, M.	23a	POROSHIN, C.	23c(2)
PELIKHOV, I.	22a(1)	POTAPOV, B.	16b(1)
PENTIN, C.	13b(2)	POTEYENKO, G.	4a(5)
PEREKHODKO, I.	31	PRASOLOV, A.	21a(1)
PERESYPKIN, O.	13a(3)	PRIBYTKOV, G.	21c
PERSHAY, F.	20	PRIDENNIKOV, I.	14c
PETOV, M.	8	PROKHOROV, F.	22b(2)
PETREYEV, G.	16a	PROKUSHEV, D.	4a(2)(a)
PETROSOV, R.	22f	PROSKUR, R.	16e
PETROV, H.	14g	PROTCHENKO, Yu.	3f
PETROV, M.	7	PUCHKOV, Ya.	15
PETROVSKIY, N.	4a(5)	PUSHAREV, W.	5b
PETRUKHIN, D.	23	PUSHKIN, N.	4a(2)(b)
PHILIPENKO, L.	15a(1)	PUTYATA, G.	4f
PILIPETS, V.	4a(3)(b)	PYROV, D.	33
PIRIYEV, P.	15a(4)	PYSHKIN, V.	21b(2)
PISAREV, C.	4a(4)	RADCHENKO, V.	8c
PITIK, A.	23	RAKHMANOV, F.	3b(2)
PIVOVAR, A.	15a(3)	RAKLITSKIY, C.	3c(1)(b)
PIYAVSKIY, F.	8c	RATNIKOV, D.	6
PLATONOV, P.	27	RASHKIN, P.	21i
PODAYADOV, I.	23c(2)	RAZHEV, Z.	5c(2)
PODIL'KO, R.	21c(1)	RAZINKIN, K.	3d
POLENOV, V.	14c(3)	REMIZOV, V.	15a(5)
POLISHCHUK, M.	6b(1)	REVA, A. S.	3a(4)
POLUKHIM, G.	6e	REVEGUK, P.	22a(2)
POLYAK, M.	32	REYZA, N.	5e
POLYAKOV, I.	6a(4)	REZNICHENKO, L.	3c(1)

Name	para	Name	para
RIVZHA, S.	6a(3)	SAVKIN, N.	15a(2)
ROGACH, M.	12	SAYAYDUK, Ya.	15f
ROY, E.	24a	SBOYEV, S.	13b
ROZHKOVSKIY, D.	33	SEKERIN, D.	13a
ROZIT, A.	4a(4)	SEKIRIN, P.	6c(2)
RUBAN, D.	24d	SELIN, G.	31
RUBINSHETYN, V.	5	SELIVERSTOV, A.	23e
RUBTSOV, P.	5f	SEMCHENKO, F.	24
RUDACHENKO, K.	3a	SEMED'YANOV, Yu.	23b
RUDNEY, B.	3h(2)	SEME NOV, R.	7f
RUDNYY, A.	23d(1)	SEME NOV, R.	22c
RUDOLPHSKAYA, A.	16c	SEME NOV, S.	21d
RUDOY, V.	4a(3)	SENSKY, L.	8c
RULEV, A.	14g	SENIN, M.	11
RUSOV, H.	16a	SERDIN, Ya.	5c(1)
RUZANOV, A.	33	SEREGIN, D.	21d
RYABUKHIN, O.	23b(1)	SERENCHUK, P.	23
RYBAKOV, O.	4b	SERGEYEV, D.	11
RYBIN, C.	8f	SERGIYENKO, B.	32
RYLOVTSEV, G.	8a	SEROV, H.	15a(3)
RYZHAVSKIY, V.	5c	SEROV, M.	13f
SAABOLOV, I.	21g	SHABROV, N.	23a(2)
SAGUNOV, V.	13e	SHADUNTS, B.	22c(2)
SAKHATSKIY, A.	24a(2)	SHALMAN, P.	32
SAKHNO, Z.	5c(1)	SHANSKIY, O.	15a(3)
SAMARSKIY, F.	23e(2)	SHAPAREV, A.	16c(2)
SAPOZHINETS, D.	23a(1)	SHAPOVALOV, G.	8b
SARYCHEV, M.	10	SHARUPICH, M.	8a
SASHIN, L.	3b	SHAYEV, B.	5c(1)
SAVCHENKO, R.	24b	SHCHADOV, A.	16b
SAVCHENKO, Ya.	22d	SHCHEDRIN, M.	3a(2)
SAVCHUK, L.	4d	SHCHEGLOV, E.	3c(2)
SAVICH, Ye.	4a(1)	SHCHEPELEV, I.	8c
SAVINKOV, Yu.	4a(1)(b)	SHCHERBAKOV, P.	23e(2)
SAVITSKIY, O.	22b	SHEKHOVTSEV, G.	21c(1)

Name	para	Name	para
SHELEPINDOV, A.	4c	SIMIKYAN, P.	21c(3)
SHENBEROV, I.	21j	SINITSYN, P.	4a(1)
SHERSTUYUK, I.	5	SIROTKIN, Yu.	3e
SHEVCHCHENKO, A.	23	SIRPINSKIY, B.	18
SHEVYREV, G.	22a(3)	SIVENKO, P.	33
SHIGAYEV, M.	4e	SKAYDUROV, L.	16c(1)
SHIGAYEV, P.	7c	SKLYADNEV, T.	8c
SHILOV, B.	6c(2)	SKLYANSKIY, V.	21d
SHIPKOV, B.	33	SKOROMNYY, I.	12
SHIPOV, E.	14e	SLADKEVICH, A.	13a(3)
SHISHKEVICH, Y.	3a(1)(b)	SLADKEVICH, V.	13b(1)
SHISHKIN, R.	21a(2)	SLEPOV, A.	3b
SHISHOV, G.	13e	SLOPODSKOY, B.	21d(2)
SHKIDCHENKO, N.	11	SLYUSAREV, P.	7b
SHLOMIN, N.	6c	SMERTIN, V.	13
SHLYANDIN, E.	33	SMIRNOFF, V.	13b
SHMYGA, Yu.	3g(1)	SMIRNOV, B.	13a(1)
SHOTKIN, H.	4c	SOKOLOV, O.	22a(2)
SHPARKOVSKIY, G.	24	SOKOLOV, P.	6b(2)
SHPIRKO, Z.	23g	SOLDATOV, D.	15a
SHUL'GA, F.	14f	SOLDATOV, K.	4b
SHUL'PIS, I.	3f(1)	SOLOV'YEV, Ya.	8e
SHUMILOV, V.	21d	SOLOVYKU, E.	15d
SHUMSKIY, G.	14d	SOMISKOV, Yu.	6a(1)
SHUMSKOV, A.	3h(1)	SOROKIN, A.	3c(2)
SHUPENEY, S.	5h	SOROK, K.	4d
SHUSHKOV, L.	4a(1)(a)	SOSHNIKOV, E.	23c
SHUSTIKOV, B.	23c(2)	SOTNIKOV, L.	24
SHVAGIREV, B.	14c	SRETENSKI, B.	2
SHVEDOV, E.	27	SRETENSKIY, R.	3a(1)(b)
SIDORENKO, A.	4d	STARCHENKO, B.	16c(2)
SIDORKIN, R.	4e	STARKOV, L.	4
SIDOROV, A.	3g(1)	STAROSTIN, I.	26
SIDOROVICH, M.	5c(1)	°STAT'YAN, C.	15b
SIDORV, B.	24b	STEPANOVICH, S.	8f

Name	para	Name	para
STEPANOV, S.	4b	TIMOSHIN, V.	14b
STEPUK, R.	4b	TISHCHENKO, Yu.	3d
STEPUSHIN, G.	8g	TITENKOV, N.	8a
STERNIN, A.	3a(1)	TITENKOV, V.	14d
STRELKOV, K.	21b	TITKOV, A.	13a
STRIGUNOV, F.	4d	TITKOV, I.	22a
STRIZHKOV, B.	7g	TITOV, D.	7c
STRIZHKOV, N.	7h	TODOROV, N.	4a(2)(a)
STRUCHKOV, H.	8	TOFAN, M.	15d
STRUYEV, C.	23e	TOKARCHUK, P.	4a(1)(a)
SUKOV, A.	4a(5)	TOKUN, B.	14b
SULEYMANYAN, H.	7c	TRAPEZNIKOV, H.	22b(2)
SUMAKOV, I.	4a(2)(a)	TRAVKIN, E.	22
SURKIN, S.	12	TRIFONOV, A.	6b
SUROROV, S.	4	TRISHANKOV, N.	21a
ŠUROVTSEV, E.	2	TRLETSKIY, C.	24c
SVETLAKOV, A.	30	TROFIMUK, O.	15a(5)
SVIRID, A.	2	TRUNOV, K.	6b(1)
SVIRIDENKO, C.	3a(3)	TRUSHIN, M.	5c
SVYATENKO, A.	13d	TRYKOV, D.	26
SYCHEV, M.	8g	TSINGLER, A.	15f
TAKOV, V.	4e	TSIPORUKH, U.	3a(1)(b)
TALALIKHIN, B.	11	TSIULA, N.	15d
TAMBOVTSEV, Ye.	4d	TSOKOLOV, Z.	3b
TARAN, V.	4a(3)(a)	TSUSHKO, K.	15c(2)
TARASENKO, H.	21b(2)	TSVETKOV, R.	21b
TARASOV, A.	4a	TSVETKOV, V.	14a
TARASOV, I.	6c	TSYGANIN, R.	7b
TARGONSKIY, R.	16c	TUNIK, O.	6a(5)
TARUTIN, N.	12	TURIKOV, P.	7e
TASHCHYAN, O.	22c	TUROVTSEV, D.	16a(1)
TELESHEV, O.	4	TUZOV, K.	5h
TENININ, G.	6b(2)	TYAGUNIN, S.	7b
THACHENKO, G.	14b	TYAPKIN, N.	13b(2)
TIKHONOV, C.	16c(2)	TYURIN, M.	22b(3)

Name	para	Name	para
ULIKHIN, H.	23d(1)	VLASOV, P.	7c
ULYATOVSKIY, E.	23c(3)	VOLCHIK, N.	33
UMANSKIY, D.	4	VOLKOV, G.	23b(3)
UPOROV, M.	6c(1)	VOLKOV, P. C.	3a
URAZHTSEV, Ye.	7e	VOLNYANSKIY, M.	24a(2)
URBANUS, V.	21b	VOLODIN, C.	3k
USATENKOV, D.	22b(3)	VOLYNSKIY, N.	16f
USIK, B.	4a(2)	VORBERTS, A.	14c(1)
USTINOV, V.	4a(3)(b)	VORNOY, S.	27
UTKIN, N.	14a	VORONOV, H.	15a(3)
UTKIN, O.	4a(1)(a)	VORONOV, P.	33
UTKIS, D.	15c(2)	VORONOV, V.	3f(1)
VAENKOV, B.	15c(1)	VOROSHILOV, M.	23e
VAKHRUSHEV, O.	3j	VOSOBOYNIK, P.	7a
VALOV, Ya.	7b	VORSAYEV, P.	33
VANIN, D.	14c(3)	VOVKOB, M.	6f
VASHKEVICH, P.	33	VRAGIN, A.	6b(2)
VASILINENKO, A.	3c	VRAGOV, I.	33
VASIL'KOV, I.	20	YAGOFAROV, R.	15b
VASILY, B.	23c	YAKHENKO, F.	8d
VASIL'YEV, B.	3g	YAKIN, E.	3e
VASIL'YEV, Ye.	23	YAKOVENKO, B.	7d
VASOL'YEV, Yu.	14d	YAKOVLEV, G.	7c
VAYNBERG, D. E.	3a(4)	YAKOVLEV, Z.	6e
VECHERENKO, V.	8	YAKUSHEV, L.	23e(2)
VEDUTENKO, B.	21a(1)	YALEFEROV, H.	3j
VERBITSKIY, E.	14c	YARMCHENKO, K.	7b
VERGOPULO, Yu.	5a	YAROSHENKO, R.	24a
VERSHININ, L.	15e	YASHCHUK, M.	21h
VERSHININ, N.	24b	YEGOROV, O.	22b(3)
VERSHININ, Ya.	16b(2)	YELIN, W.	3a(2)
VILINOV, Y.	3b(1)	YELKIN, B.	15
VINOKUOV, G.	16b(1)	YELKIN, P.	11
VISHIN, S.	4a	YEPISHEV, R.	33
VLASOV, I.	9	YERMILKO, V.	5b

Name	para	Name	para
YERMOLAYEV, I.	13c	ZAYTSEV, O.	4a(2)(a)
YERSHIKOV, L.	23c	ZAYTSEV, S.	16a
YERSHOV, S.	15a(1)	ZAV'YALOV, A.	21a(2)
YERZH, W.	23e	ZDETOVETSKIV, I.	4a
YESIPOV, O.	10	ZELKIN, W.	5
YUKHIMIK, A.	6c(1)	ZEYAKIN, P.	4e
YUKHNIN, M.	8d	ZGERSKIY, C.	15b
YULAYEV, H.	15c	ZGERSKIY, M.	12
YUMASHEV, C.	3a(1)	ZHDANOV, A.	14c(2)
YURASOV, A.	4b	ZHELENZNOV, I.	7c
YURCHENKO, E.	21h	ZHELNIN, E.	3a(2)
YUSHKIN, N.	3h(2)	ZHELNIN, R.	2
YUSHNYY, V.	4c	ZHIDKOV, K.	13b
YUSUPOV, Yu.	3c(1)(b)	ZHITOV, T.	5f
YUTSEVICHUS, T.	23d	ZHUGAN, D.	3c(1)
ZABOLOTNYY, F.	4e	ZHUKOLIN, E.	15a(1)
ZABOLOTNYY, T.	6a(5)	ZHUKOV, C.	14d
ZABUDSKIY, K.	3a(1)(a)	ZIMANKOV, C.	16
ZADORSKIY, D.	8d	ZIMANKOV, K.	31
ZAGORSKIY, H.	22a	ZIMIN, D.	33
ZAKHAROV, B.	8b	ZORIN, E.	16e
ZALOMIN, L.	15c(2)	ZOZULYA, M.	15c(1)
ZAPOROZHETS, V.	16c(2)	ZUDANOV, V.	3a
ZAYCHENKOV, M.	21j	ZVONOV, P.	24b
ZAYNULIN, S.	3b(2) *		

Appendix F

SYMBOLS

The information contained in this appendix is furnished both as a guideline that may be used for the rapid posting of situation maps and overlays and to supplement the data contained in FM 21-30. Only selected items of equipment and units have been depicted. For non-US symbols refer to AP-220-3-18-70-INT for examples.

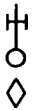
Air Defense

SYMBOL	IDENTIFICATION
 23/2	Twin 23mm automatic AA gun ZU-23
 23/4	Quad 23mm SP automatic AA gun ZSU-23-4
 57	57mm automatic AA gun S-60
 57/2	Twin 57mm SP automatic AA gun ZSU-57-2
 SA-4	TEL, SA-4 GANEF
 SA-6	TEL, SA-6 GAINFUL
 SA-7	SA-7 GRAIL
 SA-9	TEL, SA-9 GASKIN

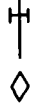
Antitank Weapons

SYMBOL	IDENTIFICATION
	Antitank grenade launcher RPG-7
 AT-3 MP	Antitank guided missile manpack AT-3 SAGGER
 AT-3	Antitank guided missile AT-3 SAGGER on BRDM/BRDM-2
 73	73mm recoilless gun SPG-9
 100	100mm antitank gun

Artillery Weapons

 82	82mm mortar M1937
 120	120mm mortar M1943
 240	240mm mortar M-240
 122	122mm howitzer D-30
 122	122mm SP howitzer M1974
 152	152mm howitzer M1943 D-1

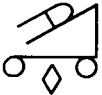
Artillery Weapons *continued*

SYMBOL	IDENTIFICATION
 152 GH	152mm SP gun-howitzer
 152 GH	152mm gun-howitzer D-20
 130	130mm field gun M-46
 180	180mm gun S-23

Electronic Equipment

	Radar station of an unknown type
 LT	LONG TRACK target acquisition radar (For the purpose of rapid identification abbreviation of the radar designation may be entered to the right of the symbol.)
 PH 040500Z	PAT HAND missile control radar last known to be active at 0500 hours Zulu on the fourth day of the month
 FC 060600Z	FIRE CAN fire control radar last known to be active at 0600 hours Zulu on the sixth of the month
	Radio direction finder station
	Radio intercept/monitoring station
	Communications jamming station

Surface-to-surface Missiles and Rockets.

SYMBOL	IDENTIFICATION
 FROG-7	TEL in launching site of FROG-7
 SCUD B	TEL in launching site of surface-to-surface guided missile SCUD B SS-1c (on MAZ-543)
 SCUD A	TEL in launching site of surface-to-surface guided missile SCUD A SS-1b (on JS chassis)
 SCALEBOARD	TEL in launching site of surface-to-surface guided missile SCALEBOARD SS-12
 122/40	122mm rocket launcher (40-round) BM-21

Tanks, Armored Fighting Vehicles and Assault Guns.

	Amphibious tank PT-76
	Medium tanks T-54/55, T-62 and T-72
	Amphibious Armored Combat Vehicle BTR-60
	Amphibious scout cars BRDM or BRDM-2
 BMP	Amphibious armored infantry combat vehicle BMP
	Armored personnel carrier BTR-50PK

Tanks Amrmored Fighting Vehicles and Assault Guns

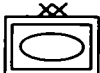
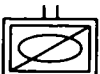
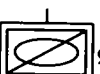
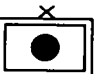
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SYMBOL	IDENTIFICATION
 BMD	Airborne amphibious combat vehicle BMD
 57	Light assault gun ASU-57
 85	Light assault gun ASU-85
 100	Medium assault gun SU-100

Units.

19G		12G	19th Guards Motorized Rifle Regiment, 12th Guards Motorized Rifle Division
		19G 	Engineer Company, 19th Guards Motorized Rifle Regiment
		20 	Antitank Battery, 20th Motorized Rifle Regiment
		17 	Antitank Battalion, 17th Motorized Rifle Division
17		18	17th Motorized Rifle Division, 18th Combined Arms Army
		19G 	Medium Tank Battalion, 19th Guards Motorized Rifle Regiment
1		21G	1st Medium Tank Battalion, 21st Guards Medium Tank Regiment
	Mdm		

Units *continued*

SYMBOL	IDENTIFICATION
12  10G	12th Tank Division, 10th Guards Tank Army
 21	Reconnaissance Battalion, 21st Motorized Rifle Division
 /20	Amphibious Tank Company, U/I Reconnaissance Battalion, 20th Motorized Rifle Division
 /20 Mtr	Motorized Reconnaissance Company, U/I Reconnaissance Battalion, 20th Rifle Division
 122	122mm Howitzer Battery (Towed), 16th Motorized Rifle Regiment
1  122	1st 122mm Howitzer Battalion, Artillery Regiment, 17th Motorized Rifle Division
 18	Army Artillery Brigade, 18th Combined Arms Army
 19	Artillery Regiment, 19th Motorized Rifle Division
10  CF	10th Artillery Division, Central Front

Appendix G

EQUIPMENT PERFORMANCE CHARTS

This appendix provides equipment performance charts for selected items of opposing forces equipment.

Ground Weapons	G-1
Surface-to-Surface Missiles	G-2
Surface-to-Air Missiles	G-3
Armored Fighting Vehicles	G-3
Tanks	G-3
Air Defense Radars	G-4
Target Acquisition, Detection and Surveillance Equipment	G-4
Bridging and Stream Crossing Equipment	G-5
Amphibious Vehicles	G-5
Tracked Prime Movers	G-5
Wheeled Vehicles	G-5
Aircraft	G-6
Helicopters	G-7
Tactical Radio Communications Equipment	G-7
Signal Intelligence Systems/Equipment	G-7
Landmines	G-8

Ground Weapons

Weapon	Principal Use	Effective Range (m)		Rate of Fire (Rd/Min)	Armor Penetration (mm) at 0 to 500 Meters	Remarks
		Horizontal	Vertical			
7.62mm LMG RPK/PK	AP	800		250	Unknown	
23mm AA Gun (dual) ZU-23	AD/AP	1,000	2,500	2000	25	Normally used by airborne units
23mm AA Gun (quad) (SP) ZSU-23-4	AD/AP	1,000	3,000	4000	25	On-carriage fire control radar GUN DISH
57mm AA Gun S-60	AD		4,000-6,000	120	106	Off-carriage FLAP WHEEL control radar
57mm AA Gun (SP) ZSU-57-2	AD		4,000	240	106	Mounted on modified T-54 tank chassis
57mm AT Gun (SP) ASU-57	AT	1,150-1,220		Unk	85-100	Air Droppable
73mm Rcl Gun SPG-9	AT	1,000		Unk	400	
82mm Mort M1937	FA	3,040		25		
82mm Rcl Gun B-10	AT	4,470		6	240	

Ground Weapons

Weapon	Principal Use	Effective Range (m)		Rate of Fire (Rd/Min)	Armor Penetration (mm) at 0 to 500 Meters	Remarks
		Horizontal	Vertical			
85mm AT Gun (SP) ASU-85	AT	950-1,150		Unk	102-103	Air Landable
85mm ATGL RPG-7	AT	500		4-6	330	
ATGM AT-2	AT	2,500		Unk	400	Quad mounted on the BRDM/BDRM-2
ATGM AT-3	AT	3,000		Unk	400	Mounted on the BMP-2 and BMD (single launch rails), BRDM (six launch rails) and BRDM-2 (six launch rails). Manpack version also.
100mm AT Gun (SP) SU-100	AT	1,500		Unk	380	Maximum range: 15,400 meters
100 mm AT Gun T-12	AT	1,000		10	406	Maximum range: 8,500 meters
100mm AT Gun M1955	AT	1,000		7	380	Maximum range: 15,400 meters
120mm Mort M1943	FA	5,700		9		Minimum range: 500 meters
122mm How D-30	FA	15,300		8	500	
122mm How (SP)	FA	15,300		4-6	460	
122mm Gun D-74	FA	24,000		6	185	
122mm RL M1972/ BM-21	FA	11,000 short round 20,500 long round		40rd SALVO 10min RELOAD		40 round (SP)
130mm Gun M-46	FA	27,000		5	240	
140mm RL RPU-14/ WP-8	FA	9,810		4min RELOAD		16 round
152mm How D-1	FA	12,200		4	82	
152mm Gun-How D-20	FA	18,500		5	130	
152mm Gun-How (SP)	FA	18,500		4-6	130	
160mm Mort M-160	FA	8,040		3		
180mm Gun S-23	FA	30,000		1	Unknown	
240mm Mort M240	FA	9,700		1		

Surface-to-Surface Missiles

System	Effective Range (km)	TEL	Propellant	Ammunition	Guidance	Associated Equipment
FROG-7	70	Wheeled	Solid	HE/Nuc/CB	None (spin stabilized)	END TRAY radar
SS-1c SCUD B	280	Wheeled or tracked	Liquid	HE/Nuc/CB	Inertial	END TRAY radar and medium cranes
SS-12 SCALEBOARD	800	Wheeled	Liquid	Nuc	Inertial	END TRAY radar, large cranes and pole trailers

Surface-to-Air Missiles

System	Type	Slant Range (km)	Effective Ceiling (km)	Transporter Erector Launcher	Ammunition	Rate of Fire	Associated Equipment
SA-4 GANEF	Medium/high	70	24	Track mounted 2 missiles	HE	1 to 2 missiles simultaneously	Medium missile transporters and a PAT HAND radar
SA-6 GAINFUL	Low/medium	30-35	.9 to 10	Track mounted 3 missiles	HE	1 to 3 missiles in ripple fire	Light missile transporters and a STRAIGHT FLUSH radar
SA-7 GRAIL	Low	3.5	.5 to 3	Manpack, single shoulder fired	HE	1 missile per target	
SA-8 GECKO	Low	10 to 15	.5 to 6	Three-axle amphibious vehicle mounting 4 missiles	HE	2 missiles simultaneously	
SA-9 GASKIN	Low	7	Unknown	Modified BRDM-2 amphibious armored vehicle mounting 4 missiles	HE	1 to 4 missiles simultaneously	

Armored Fighting Vehicles

Nomenclature	Type	Personnel	Maximum Range (km)	Maximum Speed (kmph)	
				Road	Water
BTR-60 (1)*	Wheeled 8 x 8	16	500	80	10
BMP (2)*	Tracked	11	300	55	8
BTR-50 (1)*	Tracked	22	260	44	11
BMD (2)*	Tracked	6-9	300	60	8
BRDM(1)(3)	Wheeled	5	500	80	9
BRDM-2 (1)(4)*	Wheeled	4	750	100	10

NOTES:

- (1) May be equipped with 7.62mm and 14.5mm machineguns in various combinations.
 (2) All models equipped with 73mm smooth bore gun, AT-3 missile and a 7.62mm machinegun.
 (3) May be equipped with multiple launch rails for AT-2/3.
 (4) May be equipped with multiple launch rails for AT-2/3 or SA-9 missiles.
 * All models equipped with improved vision devices.

Tanks

Type	Weight (MTons)	Crew	MAIN ARMAMENT				Range (km)
			Caliber (mm)	Effective Range (m)	Penetration (mm) 0 to 1,000 Meters	Maximum Road Speed (kmph)	
Tk (amph) PT-76 (3)	14	3	76	1,000	120 Heat	44 (1)	260 (2)
Tk (mdm) T-54/55 (3) (4)	36	4	100	1,000	380 Heat	50	500 (2)
Tk (mdm) T-62 (3) (4)	36.5	4	115	1,500	450 Heat 300 APS	50	500 (2)
Tk (mdm) T-72 (3) (4)	35	3	122	1,800	450 Heat	70	500

NOTES:

- (1) Water speed 10 kmph. (3) Improved vision devices.
 (2) Internal fuel supply only. (4) Snorkeling capability.

Air Defense Radars

Name	Type	Power (kw)	Frequency Band	Maximum Range (km)	Allocation	Remarks
GUN DISH	FC	100 to 135	J	20	1/ZSU-23-4	Track mounted
FIRE CAN SON-9	FC	300	E	90	1/57mm AA gun Btry	Trailer mounted
FLAP WHEEL	FC	Unknown	I-J	Unknown	1/57mm AA gun Btry	Provides fire control data for AA guns
PAT HAND	FC	Unknown	H	Unknown	1/SA-4 Btry	Track mounted
STRAIGHT FLUSH	FC	Unknown	G & H	Unknown	1/SA-6 Btry	Track mounted
LONG TRACK	TA	Unknown	E	Unknown	1/SA-4 and SA-6 Bn and Regt	Track mounted
FLAT FACE P-15 (3)	TA/EW	500	C	208	2/Tk and Mtr Rfl Div 4/ER Bn, AD Bde	Van mounted Emplacement time: 10 minutes
SQUAT EYE P-15-M (2)(3)	TA/EW	500	C	208	4/ER Bn, AD Bde	Van mounted Emplacement time: 10 minutes
SPOON REST P-12 (4)	EW	350	A	270	4/ER Bn, AD Bde	Van mounted
THIN SKIN	HF	Unknown	H	Unknown	1/SA-4 and SA-6 Regt 4/ER Bn	Van mounted (1)
PATTY CAKE	HF	Unknown	Unknown	205	4/ER Bn, AD Bde	Van mounted

NOTES:

(1) Van may be mounted on a truck or trailer.

(3) Possible IFF capability.

(2) Uses the FLAT FACE electronic system.

Target Acquisition, Detection and Surveillance Equipment

Name	Type(s)	Power (kw)	Frequency (MHz)	Maximum Range (km)	Allocation	Remarks
Radar (Gnd Survl) GS-11	Company-level short-range surveillance	10	9,700	1.2 pers 4.5 veh	As allocated	Man carried in 2 loads, tripod mounted Emplacement time: 10 minutes
Radar (Gnd Survl) GS-12	Regimental level medium-range surveillance	25	9,000	3.5 pers 12.0 veh	1/Regt	Man carried in 3 loads, or mounted on light truck, dismounted for use. Emplacement time: 15 minutes
Radar (Gnd Survl) GS-13	Division-level long-range surveillance	50	9,500	12.0 pers 25.0 veh	1/Tgt Acq Btry	Truck mounted Emplacement time: 15 minutes
Radar (CB)	Countermortar/ counterbattery	200 to 300	2,500 to 3,000	Detection—39 Tracking—7	1/Tgt Acq Btry	Truck or track mounted
Radar (MET) END TRAY RMS-1	Meteorological	Unknown	Unknown	Unknown	2/Tgt Acq Btry 1/Arty Regt 1/FROG-7 Bn 4/SCUD Bde 4/SCALEBOARD Bde	Trailer mounted
Radar (SLAR)	Long-range surveillance	100	10,000	Unknown	As allocated	Mounted on surveillance aircraft
Unattended sensors	Acoustic, distur- bance, electro- magnetic and seismic				As allocated	
Laser ranging set				25 to 10.0		Portable, tripod mounted
Sound ranging set				15	1/Tgt Acq Btry	

Bridging and Stream Crossing Equipment

Designation	Carrying Capacity (tons)	Clear Span Length (m)	Assembly Time (min)	Notes
Tk Lchd Brg Set T-55 MTU	50	18	3	
Trk Mtd Brg Set TMM	60	40	20 to 45 (1)	Multispan type, set has 4 sections
Ponton Brg Set TPP	50 to 70	265 to 205	120 to 150 (1)	Set has total of 96 sections
Ponton Brg Set PMP	60	227 to 119 (2)	30 (1)	Set contains 32 river and 4 shore pontons Half set contains 16 river and 2 shore pontons
Ponton Brg Set NZhM-56	Approx 150	Indefinite	Unknown	Used in rear areas

NOTES:

- (1) Assembly time will vary with light conditions and stream velocities.
(2) Half set data.

Amphibious Vehicles

Name	Type	Personnel	Capacity Cargo (kg)	Maximum Speed (kmph) Road	Water	Cruising Range Land (km)
Amph Trk GAZ-46 (MAV) (1)	Light, wheeled 4 x 4	5	500	90	9	500
Amph Trk 485A (BAV-A) (1)(2)	Medium, wheeled 6 x 6	25	2,500	60	10	480
Trkd Amph Trans PTS-M (1)(2)	Tracked	72	5,000 (3) 10,000 water	40	15	300
Amph Ferry Set GSP (1)(4)	Tracked (6)	Unknown	52,000 (5)	36 (6)	8 (5) (6)	Unknown

NOTES:

- (1) Equipped with improved vision devices, infrared driving lights and infrared searchlights.
(2) Equipped with ramp and tailgate to facilitate loading.
(3) Land/water cargo capacity.
(4) Set includes 2 tracked ferry transporters, each mounting a one-half section of the heavy amphibious ferry.
(5) Ferry characteristics.
(6) Amphibious vehicle characteristics.

Tracked Prime Movers

Name	Speed (kmph)	Range (km)	Personnel Capacity	Uses
AT-P*	50	500	9	Towing light artillery weapons
ATS-59	40	500	12	Towing medium artillery weapons
AT-T	35	700	18	Towing heavy artillery including 180mm gun

*Equipped with 7.62mm machinegun.

Wheeled Vehicles

Name	Type	Personnel	Capacity Cargo (kg)	Speed (kmph)	Cruising Range (km) Inboard Fuel
UAZ-69	4 x 4	8	650	90	535
UAZ-469	4 x 4	7	600	100	750
GAZ-66	4 x 4	22	2,000	95	875
ZIL-130	4 x 2	27	4,000	90	600

Wheeled Vehicles

Name	Type	Personnel	Capacity	Cargo (kg)	Speed (kmph)	Cruising Range (km)
						Inboard Fuel
ZIL-131	6 x 6	27		5,000	80	850
Ural-375	6 x 6	27		4,500	75	650
Ural-377	6 x 4	27		5,600	75	547
BAZ-135	8 x 8	79		10,000	65	500
GAZ-46 (MAV)	4 x 4	5		500	90	500
BAV	6 x 6	25		2,500	60	480
KRAZ-255B	6 x 6	3		7,500	70	750

Aircraft

Name	Type	Power Plant	Maximum Speed (kmph)	Combat Radius (km)	Remarks and Equipment
FRESCO Mig-17	Fighter/ground attack	Single turbojet	1,140	480	May carry a variety of ground attack weapons
FARMER Mig-19	Fighter/ground attack	Twin turbojet	1,440	685	May carry a variety of ground attack weapons (1)
FISHBED Mig-21	Fighter	Single turbojet	Mach 2.1 at altitude	1,000	May carry a variety of ground attack and air-to-air weapons (1) (2) (3)
FLOGGER Mig-23	Fighter/ground attack	Single turbojet	Mach 2.5 at altitude	960	May carry a variety of ground attack and air-to-air weapons and has a variable geometry wing system (1) (2) (3)
FOXBAT Mig-25	Fighter/interceptor	Twin turbojet	Mach 3.2 at altitude	800	May carry air-to-air missiles (2) (3)
FITTER-A SU-7	Ground Attack	Single turbojet	Mach 1.5 at altitude	480	May carry a variety of ground attack weapons (1) (2)
FITTER-C SU-17	Ground Attack	Single turbojet	Mach 2.3 at altitude	630	May carry a variety of ground attack weapons (1) (2)
BREWER Yak-28	Light bomber	Twin turbojet	1,200	2,575	May carry a variety of ground attack and air-to-air weapons (1) (2)
BACKFIRE	Strategic bomber	Twin jet	2,400	2,600	May carry ground attack weapons and has a variable geometry wing system (1) (2)
BLINDER TU-22	Strategic bomber	Twin turbojet	Mach 1.4 at altitude	2,250	May carry a variety of ground attack weapons (1) (2) (3)
CARELESS TU-154	Assault transport	Triple turbofan	850	3,000	96 combat equipped troops (2) (3)
CLASSIC IL-62	Assault transport	Quad turbofan	875	5,000	184 combat equipped troops
CANDID IL-76	Freight transport	Turbofan	850	2,500	
CUB AN-12	Transport	Turboprop	600	1,800	100 paratroops
COCK AN-22	Transport	Turboprop	740	2,500	

NOTES:

(1) Possible nuclear weapons delivery capability.

(2) Possible EW configuration.

(3) Possible reconnaissance capability.

Helicopters

Name	Personnel	Cargo (kg)	Maximum Speed (kmph)	Combat Radius (km)	Remarks
HARE Mi-1	2-3	150	150	100	
HOUND Mi-4	16	2,358	203	520	Mounts a light machinegun
HOOK Mi-6	65	15,260	344	378	Has an all weather capability
HIP Mi-8	32	8,820	290	237	Can carry light vehicles
HARKE Mi-10	28	29,000 approx	200	250	Flying crane version of Mi-6
HIND Mi-24	8	Limited	295	277	Gunship

Tactical Radio Communications Equipment

Equipment	Frequency (MHz)	Operational Mode	Range (km)	Tuning	Use	Antenna
R-105D R-105M	36 to 46.1	FM	4 to 6	Continuous	Backpack or vehicle mounted, Infantry Company level	Whip or long wire
R-107	1 to 15	FM	4 to 6	Continuous	Company level Replaces R-105M, R-108M, R-109M, and R-114M	Whip or long wire
R-108D R-108M	28 to 36.5	FM	4 to 6	Continuous	Backpack or vehicle mounted, Artillery Company	Whip or long wire
R-109D R-109M	21.5 to 28.5	FM	4 to 6	Continuous	Backpack or vehicle mounted, antiaircraft missile battery	Whip or long wire
R-112	2.8 to 4.99	AM	40 to 200	Detent	Armored fighting vehicles	Whip, 4 or 10 meter
R-113	20 to 22.375	FM	20	Detent	Armored fighting vehicles	Whip, 4 or 10 meter
R-114D R-114M	20 to 26	FM	4 to 6	Continuous	Backpack or vehicle mounted, Battalion liaison net, Tank Company	Whip or long wire
R-123 R-123M	20 to 51.5	FM	20	Continuous and/or 4 preset channels	Armored fighting vehicles	Whip, 4 or 10 meter
R-126	48.5 to 51.5	FM	1 to 2	Continuous or 3 preset channels	Platoon to company or off vehicle	Whip
R-311 Receiver only	1 to 15	AM, CW or MCW	—	Continuous	Monitoring fire control nets and in many communication vans	Almost any INC whip, long wire directional
R-401	60 to 70	FM	40 to 50	Continuous	Division and above	Twin Yagi's
R-405	320 to 420	FM	40 to 50	Continuous	Division and above	Corner reflector

Signal Intelligence Systems/Equipment

Designation	Nomenclature	Purpose	Frequency Range	Modes	Antenna Gain	Receiver Sensitivity	Power	Required Time
Communication Intercept and Locator Sets								
SR-53-V	Intercept System A	Radio Intcp (HF)	3 to 30 MHz	AM, Voice CW, MCW, AM-SSB	Rhombic 15 dbm	-105 dbm	15 kw	3 hours
SR-52-V	Intercept System B	Radio Intcp (VHF/UHF)	30 to 300 MHz	FM, Voice	LP 10 dbm	-110 dbm	15 kw	2 hours

Signal Intelligence Systems/Equipment

Designation	Nomenclature	Purpose	Frequency Range	Modes	Antenna Gain	Receiver Sensitivity	Power	Required Time
SR-51-V	Intercept System B-1	Intcp (VHF/UHF)	30 to 300 MHz	FM, Voice	Whip 1 dbm	-110 dbm	5 kw	15 minutes
SR-50-M	Intercept System C	Intcp (VHF-UHF)	30 to 450 MHz	FM, Voice	Whip 1 dbm	-110 dbm	Battery	2 minutes
SR-54-V	Intercept Radio Relay System D	Intcp Radio Relay	30 to 300 MHz	Voice, TTY	Dish, 40 dbm; LP, 15 dbm	-110 dbm	10 kw	1 hour
SR-20-V	Direction Finding System 1	Radio DF (HF)	3 to 25 MHz	AM	Adcock 10 dbm	-90 dbm	15kw	5 hours
SR-19-V	Direction Finding System 2	Radio DF (VHF)	30 to 300 MHz	FM, Voice	Loop, no gain; Adcock 10 dbm	-90 dbm	10 kw	2 hours
SR-25-V	Direction Finding System 3	Radio DF (VHF)	30 to 300 MHz	FM, Voice	Loop, no gain	-90 dbm	5 kw	10 minutes
Noncommunication Intercept and Locator Sets								
SB-20-V	Radar Intercept System I	CM, CB, and Area Survl Radar Intcp	50 MHz to 11 GHz		Dish 40 dbm	-110 dbm	15 kw	1 hour
SB-21-V	Radar Intercept System II	Combat Surveillance	50 MHz to 10 GHz		Dish 40 dbm	-110 dbm	10 kw	30 minutes
Processing Equipment								
SAD-1-V	Automated Processing System	Proc, Anal, Data Link					100 kw	18 hours
SAD-2-V	Automated Processing System	Proc, Anal, Data Link					50 kw	10 hours

S—Special Purpose
R—Receiver
B—Radar

AD—Automated Data System
M—Manpack
V—Vehicle Mounted

Landmines

Designation	Main Charge (kg)	Employment	Remarks
TMD-B	Varies	Antitank	Wooden box with pressure board activating MV-5 pressure fuze. Obsolete.
TMB-2	5 (1) (2)	Antitank	Two tar-covered cardboard cylinders. MV-5 pressure fuze.
TM-46	5.3 (1)	Antitank	Steel cylinder with MV/5 OR MV-5k pressure fuze. Hand or machine laid.
TM-57	7 (1)	Antitank	Steel cylinder with MVZ-57 or MVSH-57 fuzes.
PMD-6	200 (1) (3)	Antipersonnel	Wooden box with MUV pull fuze.
PMD-7	75 (1) (3)	Antipersonnel	Wooden box with MUV pull fuze.
PMD-7	75 (1) (3)	Antipersonnel	Cylindrical charge in hollowed-out block of wood. MUV pull fuze.
PMN	240 (1) (3)	Antipersonnel	Plastic case. Mine is not disarmable.
PMK-40	50 (1) (3)	Antipersonnel	Cardboard or sheet metal cylinder. Resembles shoe-polish can. Built-in, spring-loaded striker. Obsolete.
OZM-3	75 (1) (3)	Antipersonnel	Bounding fragmentation mine. May be employed with a variety of fuzes including those with a remote control feature.
KHF-1/2	10 (3) (4)	Antipersonnel	Bounding chemical mine. Spreads liquid agents over ground.

NOTES:

(1) TNT
(2) Amatol
(3) Grams
(4) Black Powder

Appendix H

MOVEMENT DATA

Section 1—Movement Capabilities

General

This appendix outlines procedures for determining opposing forces movement capabilities. Included is a listing of applicable definitions and terminology, a discussion of foot and vehicle marches, the general movement procedures used by opposing forces units, applicable movement data tables, and a section of computation examples.

Definitions and Terminology

The following terms are defined as a basis for understanding march planning computations.

Arrival Time. The time the head of a column or element thereof reaches a designated point, line or object.

Column. A formation in which elements are placed one directly behind the other.

Column Gap. The space between two organized march elements following each other on the same route. It can be calculated in units of length (meters) or in units of time (minutes) as measured from the rear of one element to the front of the following element. Column gap may also be expressed as time gap.

Completion Time. The time the tail of a column passes the release point.

Infiltration.

Foot March: Infiltration is the dispatch of units over a route in small groups at irregular intervals to provide the maximum secrecy, deception, and dispersion.

Motor March: March is accomplished by the dispatch of individual vehicles or small groups of vehicles over a specified route at irregular intervals.

Length of a Column. The length of roadway occupied by a column in movement, including the gaps inside the column measured from front to rear inclusive.

March Unit. Unit that moves and halts at the command of a single commander. Normally corresponds to smaller tactical troop units.

Pass Time. Actual time between the movement when the first element passes a given point and the movement when the last element passes the same point.

TABLE OF CONTENTS

Section 1

Movement Capabilities	H-1
General	H-1
Definitions and Terminology	H-1
Foot Marches	H-3
Vehicle Marches	H-3
General Considerations	H-4

Section 2

Computation Examples	H-5
Length of Column	H-5
Pass Time or Closing Time	H-5
Time Distance	H-5
Completion Time	H-6

BASIC DATA TABLE, FOOT MARCHES				
	Visibility	*Rate of March	Normal March (8 hours)	Forced March 12 hours)
ROADS	Day	4 kmph	32 km	48 km
	Night	3 kmph	24 km	36 km
CROSS COUNTRY	Day	2 kmph	16 km	24 km
	Night	1 kmph	8 km	12 km

*Note: Computed on 50-minute hour allowing for 10-minute halt each hour.

LENGTH OF COLUMN, FACTOR TABLE FOOT MARCHES

*Formation	2m/man distance	5m/man distance
Single File	2.4	5.4
Column of twos	1.2	2.7

*Note: Opposing forces foot marches will vary with the tactical situation; normal formation is a column of twos with a file on either side of the road and staggered, much like US forces. However, columns of threes and fours may be employed where conditions permit.

PASS TIME FACTORS, FOOT MARCHES

Rate (kmph)	Factors
4	.015
3	.018
2	.020
1	.023

Rate of March. The average number of kilometers traveled in a given period of time, including short periodic halts and short delays, expressed as kilometers per hour (kmph).

Release Point. A well-defined point on a route at which elements composing a column revert to control of their respective commander and are no longer a part of the march formation.

Start Point. An unidentified point at which a movement comes under march formation control.

Time Distance. The time required for the head of a column, or any single element thereof, to move from one point to another at a given rate of speed.

Vehicle Distance. The space between two consecutive vehicles of an organized element of a column. It is measured from the rear of one vehicle to the front of the following vehicle.

Vehicle Length. The average length of the vehicles in a column. The average length of opposing forces vehicles is 5 meters.

Closing Time. The time elapsed between the arrival of the first element of a column at the release point, and the arrival of the last element at the same point. This will be equal to pass time.

Foot Marches

Organization. Units march in tactical groupings to facilitate adoption of combat formations. Tactical integrity is maintained to insure forces are ready for action on arrival at the objective area.

Formations. March formations are varied to include movement in multiple columns. Column gaps vary at each tactical echelon and are influenced by terrain and threats of US air and artillery fires. A minimum of 20 meters between platoon-sized elements of a march unit and 100 meters between company-sized march units is standard.

Rates of March. The opposing forces are capable of maintaining rates of march shown on page H-2. Normal and forced march distances are based on favorable conditions during 8 and 12-hour time periods. The rate of march does not vary for normal and forced marches. If the march is in mountainous terrain, add one hour for each 300 meters of descent to the above time periods.

Computations

Length of a Column. To determine the length of a column occupied by a dismounted unit, multiply the estimated or known number of personnel by the applicable factor.

Pass Time. To determine the pass time in minutes for a dismounted unit, multiply the length of the column (as determined above) by the appropriate factor for the estimated or known rate of march.

Vehicle Marches

Organization. In all but purely peacetime moves, formations march tactically grouped and ready for rapid deployment into battle. Whenever possible, moves take place by night or in conditions of poor visibility. Dimmed lights or infrared driving aids are generally used.

Formation. A division in an advance to contact will deploy in the following components and in the following order:

- Motorized reconnaissance elements.
- Forward detachment (not always formed, could precede motorized reconnaissance).
- Advanced guard or advanced detachment.
- Main body.
- Rear guard.

Routes. Ideally, an opposing forces division is allocated a march sector some 20 to 30 kilometers wide, within which it will have at least 2 and perhaps 3 or 4 main routes. When an encounter with the enemy is expected there will be at least one route for each first-echelon regiment. Routes usually avoid large towns and defiles, but will use major roads whenever possible. It is normal for an opposing forces division to select and prepare reserve and lateral routes for use in an emergency.

Rates of March. The average unopposed rate of advance for a division, including halts, is about 15 kmph. Crossing of contaminated zones may be done at speeds up to 40 kmph. Opposing forces doctrine anticipates up to 7 kmph forward movement after contact has been made,

	Mixed Columns	Wheels Only
Road by day	20 to 30 kmph	30 to 40 kmph
Road by night	15 to 20 kmph	25 to 30 kmph
Cross-country	10 to 15 kmph	10 to 15 kmph

Halts. Short halts of 20 to 30 minutes are made after every 2 to 3 hours of marching. Vehicles will halt in column at the roadside without breaking march formation. Normally, longer halts are only arranged during forced marches of 24 hours' duration or more, or in a nuclear, biological, chemical (NBC) environment when partial decontamination is ordered.

Separation Distances. Separation distances will depend upon convoy speed and the tactical situation.

Between vehicles	15 to 50 meters
Between battalions on the same route	3 to 5 kilometers
Between regiments or brigades on the same route	5 to 10 kilometers

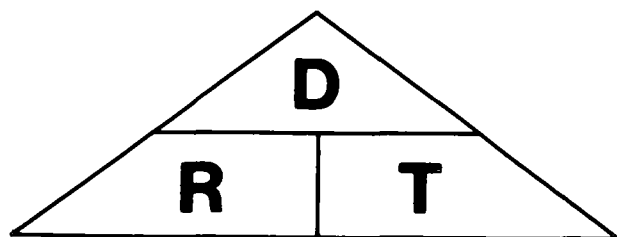
Length of Tactical March Columns. The division consists of some 2,300 to 2,500 vehicles of which about one in five is tracked. Road space requirements are:

Regiment	28 to 41 kilometers (with inter-battalion gaps, add 9 to 15 kilometers)
Division	60 to 150 kilometers (with inter-battalion gaps, add 51 to 90 kilometers)

Note: These distances do not include reconnaissance elements or forward detachments, which will be deployed in front of the main body.

General Considerations

Time Distance. Time distance (TD) is determined by dividing the distance (D)(kilometers) by the rate of march (R)(kilometers per hour); or $TD = D \div R$.



Divide a triangle as shown. Cover the unknown facts, and the uncovered portion of the triangle gives you the formula for finding the unknown. For example, if distance is unknown, cover D and RT (rate x time) remains. If rate (R) is unknown, covering R leaves $\frac{D}{T}$. Do the same for T and you find $\frac{D}{R}$ remaining.

Ready for Combat. In calculating opposing forces combat capabilities, it is considered ready for action as of the movement completion time.

Strength. Consider units as being at full personnel and equipment strengths unless specific information is given in a problem.

Start Points. The starting time and place are the time and place the unit was last reported.

Release Points. Select as the destination of the unit a logical point the unit must reach to start a particular action.

Completion Time. To determine completion time, add pass time of the column and time distance from start point to release point.

Forced Marches. For forced marches, the rate of march is not changed. Forced marches are 12 hours in duration, whereas normal marches are 8 hours in duration.

Mixed Movement. Variations in visibility or transition from road to cross-country conditions require use of applicable tables and factors in problem solving.

Rounding Rules.

Computations in minutes resulting in a fraction are rounded to the nearest full minute (e.g., 15.4 = 15 minutes; 15.5 = 16 minutes).

Computations in kilometers resulting in a fraction are rounded to the nearest tenth (e.g., 12.55 = 12.6 kilometers, 12.43 = 12.4 kilometers).

Section 2—Computation Examples

Length of Column

Question. What is the length of column for 300 men moving in 3 march units, each consisting of 3 elements? The force is reportedly moving in a column of twos with a 2-meter interval between men in column.

Answer. 680 meters.

$$\begin{aligned} LC &= (\text{number of men} \times \text{factor} + \text{column gaps}) \\ &= 300 \times 1.2 + 6(20) \\ &= 360 + (200 + 120) \\ &= 680 \text{ meters} \end{aligned}$$

Explanation.

- (1) Number of men is 300 (problem statement).
- (2) Appropriate factor is 1.2 based on 2-meter interval between men and column of twos (problem statement).
- (3) There are two column gaps between three march units. The march formation provides for 100 meters between march units.
- (4) There are six intervals between elements of the march units. The march formation provides for 20 meters between elements.

Pass Time or Closing Time

Question. What is the pass time for a dismounted unit having a length of column of 680 meters moving at an estimated rate of 4 kmph?

Answer. 10 minutes.

$$\begin{aligned} PT &= LC \times \text{pass time factor} \\ &= 680 \times .015 \\ &= 10.2 \text{ or } 10 \text{ minutes.} \end{aligned}$$

Explanation.

- (1) Length of column is given as 680 meters in the problem statement. If length is not stated, it is computed as in example.
- (2) Pass time factor for the estimated rate of 4 kmph.
- (3) Answers in minutes are rounded to the nearest full minute.

Time Distance

Question. What time distance is required for a dismounted element to move along a road segment 21 kilometers long during daylight conditions?

Answer. 5 hours 15 minutes.

$$\begin{aligned} TD &= \frac{D}{R} \\ &= \frac{21 \text{ km}}{4 \text{ kmph}} \\ &= 5.25 \text{ or } 5 \text{ hours } 15 \text{ minutes} \left(\begin{array}{l} 60 \\ (.25) \\ (15 \text{ minutes}) \end{array} \right) \end{aligned}$$

Explanation.

- (1) Distance is given in the problem statement.
- (2) Rate of movement is taken from basic data table (page H-6) for road march during daylight hours.
- (3) Conversion of decimal to minutes is accomplished by multiplying by 60.

Completion Time

Question. What is the expected completion time of a cross-country daylight march over average terrain for a dismounted element having an estimated 680-meter length of column? The unit has a 12-kilometer distance to travel from the position of the lead element as reported at 1000 hours. No halts, other than those already computed in basic data table are anticipated.

Answer. 1614 hours.

$$\begin{aligned} \text{CT} &= \text{SP} + \text{PT} + \text{Halts} \\ &= 1000 + 0014 + 0600 \\ &= 1614 \text{ hours.} \end{aligned}$$

Explanation.

- (1) Start point (SP) time is given as 1000 hours.
- (2) Pass time is determined by multiplying length of column (given as 680 meters) by the appropriate factor (.02). (Rate of movement for the cross-country daylight condition is 2 kmph.) $\text{PT} = \text{LX} \times \text{F} = 680 \times .02 = 13.6$ or 14 minutes.
- (3) Time distance is determined by distance to be traveled (12 kilometers) by the rate of 2 kmp (from basic data table as explained above).

$$\text{TD} = \frac{\text{D}}{\text{R}} = \frac{12 \text{ kmph}}{2 \text{ kmph}} = 6 \text{ hours}$$

Appendix I

GLOSSARY

Following is a selected Glossary of Terms and Abbreviations used in this manual.

AA	Antiaircraft
AAR	Army artillery regiment
Acq	Acquisition
AD	Air defense
ADA	Air defense artillery
ADM	Atomic demolition munitions
AFV	Armored fighting vehicle
AFV BMD	Airborne amphibious combat vehicle
AFV BMP	Amphibious armored infantry combat vehicle BMP all models
AFV BRDM/-2	Amphibious scout car BRDM (BTR-40P), BRDM-rkh (BTR-40P-rkh), BRDM-U (BTR-40PU), BRDM-2 (BTR-40P-2), BRDM-2-rkh (BTR-40P-2-rkh) and the BRDM-2U (BTR-40P-2U)
AFV BTR-50/PK/PU	Armored personnel carrier BTR-50PK and the armored command vehicle BTR-50PU
AFV BTR-60/PA/PU/PB	Armored personnel carrier BTR-60P, BTR-60PA, BTR-60PB, armored command vehicle BTR-60PU and the armored forward air control vehicle
AFV	Cumulative term which includes selected models of the BTR-60, BMP, BTR-50, BMD and BRDM
A/GEN	Army general
AMIB	Army military intelligence battalion
Amph	Amphibious
Amph Ferry Set GSP	Amphibious ferry GSP
Amph Trk GAZ-46 (MAV)	Amphibious truck, 4x4 GAZ-46 (MAV)
Amph Trk 485A (BAV-A)	Amphibious truck, 6x6 485A (BAV-A)
Anal	Analysis

AP	Armor piercing
APC	Armored personnel carrier
APHE	Armor piercing high explosive
API	Armor piercing incendiary
Arty	Artillery
Armd Trkd Minelayer	Armored tracked mechanical minelayer
ARV T-54-T/JSU-T (D)	Medium tank recovery vehicle T-54-T or the heavy tank recovery vehicle JSU-T (model D)
Aslt	Assault
AT	Antitank
ATGM	Antitank guided missile
ATGM Manpack AT-3	Antitank guided missile AT-3 "SAGGER" manpack version
ATGM Veh AT-2/3	Antitank guided missile AT-2 "SWATTER" on BRDM or the antitank guided missile AT-3 "SAGGER" on BRDM
AV	Cumulative term which includes selected models of the amphibious trucks 485A, GAZ-46 and the tracked amphibian ATS-M
AW	Automatic weapons
BACKFIRE (Tu)	Models A and D
Bde	Brigade
BLINDER (Tu-22)	All models
Bn	Battalion
BREWER (Yak-29)	All models
Brg	Bridge
Btry	Battery
CAA	Combined arms army
CARELESS (Tu-154)	All models
CB	Counter battery
CBR	Chemical, biological, radiological
Cbt	Combat
CBU	Cluster bomb unit
C&D	Cover & deception
C-E	Communications Electronic
C/GEN	Colonel general
CLASSIC (I1-62)	All models
Cml	Chemical
Comm Intcp Set	Communications intercept set
Comm Intcp & Locator Set	Communications intercept and locator set

Co	Company
C of R	Chief of the rear
Const	Construction
COP	Combat Outpost
COKE (An-24)	All models
COL	Colonel
Coll	Collection
CP	Command post
CPT	Captain
CRTA	Chief of rocket troops and artillery
DAE	Division artillery element
DAG	Division artillery group
Ditching Mach MDK-2	Ditching machine MDK-2
DF	Direction finding (er)
Div	Division
Dozer DET-250	Track mounted tractor DET-250 (all models)
DZ	Drop Zone
ECM	Electronic countermeasures
ECCM	Electronic counter countermeasures
Elm	Element
ELINT	Electronic intelligence
Engr	Engineer
ER	Electronic reconnaissance
ESM	Electronic warfare support measures
Evac	Evacuation
EW	Electronic warfare or early warning
FC	Fire control
FD	Fire direction
FISHBED (MiG-21)	All models
FITTER (Su-7)	All models
FLOGGER (MiG-23)	All models
FOXBAT (MiG-25)	All models
FRESCO (MiG-17)	All models
GAB	Guards artillery brigade
GAD	Guards artillery division
GCI	Ground controlled intercept

GH	Gun-howitzer
GMRD	Guards motorized rifle division
GMRR	Guards motorized rifle regiment
GMTR	Guards medium tank regiment
GTA	Guards tank army
GTD	Guards tank division
HARE (Mi-1)	All models
HARKE (Mi-10)	All models
HE	High explosive
HEAT	High explosive antitank
HHB	Headquarters and headquarters battery
HHC	Headquarters and headquarters company
HIND (Mi-24)	All models
HOMER (Mi-12)	All models
HOOK (Mi-6)	All models
HOUND (Mi-4)	All models
How	Howitzer
Intcp	Intercept
Intg	Interrogation
Kmph	Kilometers per hour
Laser Ranging Set	Laser rangefinder
LRR	Long-range reconnaissance
REL	Radioelectronic combat
LTC	Lieutenant colonel
LTG	Lieutenant general
MAJ	Major
Mdm or mdm	Medium
MET	Meteorological
MF	Main force
MG	Major general
Mineclearing Plow Set	Mineclearing roller PT-55 or the mineclearing tank mounted plow
MOD	Mobile obstacle detachment
MOPIC	Motion picture
Mort	Mortar
MRB	Motorized rifle battalion

MRD	Motorized rifle division
MRL	Multiple rocket launcher
MRR	Motorized rifle regiment
Msl	Missile
MTB	Medium tank battalion
MTR	Medium tank regiment
Mtr Rfl	Motorized rifle
Mtrcl	Motorcycle
MT	Motor transport
Non-Comm Intcp & Locator Set	Noncommunications intercept and locator set
OB	Order of battle
OP	Outpost
Pdn	Production
Plt	Platoon
POL	Petroleum, oil and lubricants
Pon	Ponton, Pontoon
Ponton Brg Set PMP	Folding ponton bridge PMP
Ponton Brg Set NZhM-56	Floating railroad bridge NZhM-56
Ponton Brg Set TPP	Heavy ponton bridge TPP
Prime Mover AT-P	Armored tracked artillery tractor AT-P
Prime Mover AT-T	Heavy tracked artillery tractor AT-T
Prime Mover ATS-59	Medium tracked artillery tractor ATS-59
Proc	Processing
RADAR (CB)	Radar, counterbattery
RADAR (EW) SPOON REST	Radar, early warning "SPOON REST" P-12 and P-12M
RADAR (FC) FIRE CAN	Radar, antiaircraft fire control "FIRE CAN" SON-9
RADAR (FC) GUN DISH	Radar, antiaircraft fire control "GUN DISH," mounted on the ZSU-23-4
RADAR (FC) PAT HAND	Radar, missile fire control "PAT HAND"
RADAR (FC) STRAIGHT FLUSH	Radar, missile fire control "STRAIGHT FLUSH"
RADAR (Gnd Survl) GS-12	Radar, ground surveillance GS-12
RADAR (Gnd Survl) GS-13	Radar, ground surveillance GS-13
RADAR (HF) PATTY CAKE	Radar, height-finding "PATTY CAKE"
RADAR (HF) THIN SKIN	Radar, height-finding "THIN SKIN"
RADAR (MET) END TRAY	Radar, meteorological, "END TRAY" RMS-1
RADAR (SLAR)	Radar, side-looking airborne

RADAR (TA) FLAT FACE	Radar, early warning and target acquisition "FLAT FACE" P-15
RADAR (TA) LONG TRACK	Radar, early warning and target acquisition "LONG TRACK"
RADAR (TA) SQUAT EYE	Radar, early warning "SQUAT EYE" P-15-M
RAG	Regimental artillery group
Rdo	Radio
RDR or Rdr	Radar
REC	Radioelectronic combat (Electronic warfare)
Recon	Reconnaissance
Regt	Regiment
Rfl	Rifle
RL	Rocket launcher
ROD	Route opening detachment
SAM	Surface-to-air missile
SA-7 GRAIL	Surface-to-air guided missile "GRAIL" SA-7
Sap	Sapper
Scty or scty	Security
Sec	Section
Sig	Signal
SIGINT	Signal intelligence
SLAR	Side looking airborne radar
SORNG	Sound ranging
Sound Ranging Set	Sound range finding set
SP	Self propelled
Spt	Support
SSM	Surface-to-surface missile
SRLT	Senior lieutenant
Sta	Station
Sqd	Squad
SVC or Svc	Service
TAA	Tactical Air Army
Tech	Technical
TEL FROG-7	Free rocket over ground FROG-7 on transporter-erector-launcher ZIL-135 (8x8) truck
TEL SA-4 GANEF	Surface-to-air missile SA-4 "GANEF" on transporter-erector-launcher
TEL SA-6 GAINFUL	Surface-to-air missile SA-6 "GAINFUL" on transporter-erector-launcher

TEL SA-9 GASKIN	Surface-to-air missile SA-9 "GASKIN" on transporter-erector-launcher
TEL SCALEBOARD SS-12	Surface-to-surface missile SS-12 "SCALEBOARD" on transporter-erector-launcher
TEL SCUD B SS-1c	Surface-to-surface missile SS-1c "SUCDB" on transporter-erector-launcher JS chassis or MAZ-543 (8x8) truck
Tgt	Target
TI	Technical intelligence
Tk (amph) PT-76	Amphibious tank PT-76
Tk Lchd Brg Set T-55 MTU	Tank launched bridge MTU-20 (T-55)
Tk (mdm) T-54/55	Medium tank T-54 (all models) or the medium tank T-55 (all models)
Tk (mdm) T-62	Medium tank T-62 or T-62A
Tk (mdm) T-72	Medium tank T-72
Tk TV	Tank transport vehicle
TKA	Tank army
TKD	Tank division
Trk	Truck
Trk Mtd Brg Set TMM	Truck mounted scissors bridge TMM
Trkd Amphn Trans PTS-M	Tracked amphibian PTS-M
WV	Wheeled vehicle
Veh or veh	Vehicle
7.62mm LMG RPK/PK	7.62 light machinegun Kalashnikov (RPK) or 7.62mm general-purpose machinegun Kalashnikov (PK)
23mm AA Gun (dual) ZU-23	23mm automatic antiaircraft gun ZU-23
23mm AA Gun (SP) ZSU-23-4	Quad 23mm self-propelled automatic AA gun ZSU-23-4
57mm AA Gun S-60	57mm automatic antiaircraft gun S-60
57mm AA Gun (SP) ZSU-57-2	Twin 57mm self-propelled automatic AA gun ZSU-57-2
57mm AT Gun (SP) ASU-57	Airborne assault gun ASU-57
73mm Rcl Gun SPG-9	73mm recoilless gun SPG-9
82mm Mort M1937	82mm mortar M1937 (new version)
82mm Rcl Gun B-10	82mm recoilless gun B-10
85mm ATGL RPG-7	Antitank grenade launcher RPG-7
85mm AT Gun (SP) ASU-85	Airborne assault gun ASU-85
100mm AT Gun M1955	100mm field gun M1955
100mm AT Gun (SP) SU-100	Medium assault gun SU-100
100mm AT Gun T-12	100mm antitank gun T-12
120mm Mort M1943	120mm mortar M1943

122mm Gun D-74	122mm field gun D-74
122mm How D-30	122mm howitzer D-30
122mm How D-30/M1974 (SP)	122mm howitzer D-30 or the 122mm howitzer self-propelled
122mm RL M1972/BM-21	122mm rocket launcher (40 round) M1972 or the 122mm rocket launcher (40 round) BM-21
130mm Gun M-46	130mm field gun M-46
140mm RL RPU-14/WP-8	140mm rocket launcher (16 round) RPU-14 or the 140mm rocket launcher (8 round) WP-8
152mm Gun-How D-20	152mm gun-howitzer D-20
152mm Gun-How (SP)	152mm gun-howitzer self-propelled
152mm How D-1	152mm howitzer M1943 (D-1)
160mm Mort M-160	160mm mortar M-160

Appendix J

REFERENCES

AR 220-55	Field and Command Post Exercises
AR 350-2	Opposing Forces Program
TC 6-4-1	The Threat
TC 30-4	Motorized Rifle Regiment
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color
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Appendix K

INDEX

Administrative functions, training	17-13
Advance, antitank guided missile battery	14-16
Advance to contact, CAA	11-3
Air	
Assault, helicopter	14-28
Defense artillery	14-9
Defense doctrine	14-17
Defense ground forces support	14-17, 14-21
Defense planning	14-17
Defense regiment	14-9
Defense supression	14-8
Defense weapons	1-11
Reconnaissance	14-1, 14-21
Support	11-3, 14-25, 14-26
	16-6
Airborne division	13-4, 16-1
Airborne operations	16-1
Aircraft	
Reconnaissance	14-22
Tactical support	14-22
Airmobile operations	14-30
Ammunition	1-8, 1-14
Amphibious vehicles	1-3
Antiaircraft guns	1-11, 14-19
Antitank	
Ammunition	1-8
Armor	2-6
Artillery attack	1-10, 2-7
Attack momentum	2-3
Battalion	14-13
Defense	2-22, 3-9, 9-13, 10-8
Equipment	14-12
Fire	1-5
Guided Missile	1-6, 1-12, 2-7, 14-15
	16-5, 16-9

Land mines	1-16
Operations	14-8, 14-12
Reserves	2-7
Support	1-11
Weapons	1-5, 1-6, 1-7, 1-11, 1-15, 14-8
Antipartisan operations	16-16, 16-18
Armored fighting vehicles	1-13
Amphibious	1-13
Tanks	1-15
Deep-wading capability	1-15
Special equipment	1-14, 1-15
Use of snorkels	1-15
Tracked	1-14
CBR filtering system	1-15
Characteristics	1-14
Smokescreen capability	1-14
Wheeled	
AFV	1-14, 16-7
Reconnaissance	1-13
Arms Directorate	14-49
Artillery	
Accompanying	14-10
Air defense	14-9
Air support	14-25
Allocation	14-9
Built-up area	16-16
Combined arms army	11-3
Conventional	14-8
Disposition	14-10
Division	13-5
FRONT	13-11
Motorized rifle division	9-2
Night operations	16-22
Smoke operations	14-40
Tank army	12-3
Tank division	10-2
Weapon systems	14-8
Artillery Weapons and Ammunitions Directorate	14-49
Assault	
Battalion	16-13
Division	16-12
Organization	16-12
Regiment	16-13
Assault direction	
Motorized rifle battalion	5-8
Tank battalion	6-8

Assault river crossing	
Engineer support	14-43
Principles	16-6
Types	16-6
Atomic demolition munitions	2-32
Attack	16-5
Airfield	16-5
Air support	14-25
Antitank guided missile battery	14-16
Antitank guns	14-14
Artillery	
Capture of city	16-15
Conduct	2-3
Airborne operations	16-3
Built-up area	16-16
Combined arms army	11-5
Motorized rifle battalion	5-8
Motorized rifle regiment	7-7
Mountain operations	16-25
Night operations	16-27
Partisan operations	16-18
Tank army	12-3
Tank battalion	6-5
Tank division	10-6
Formation	
Assault	16-15
Combined arms army	11-2
FRONT	13-9
Motorized rifle battalion	5-7
Motorized rifle division	9-1
Motorized rifle regiment	7-7
Night operations	16-22
Tank	16-9
Tank army	12-2
Tank battalion	6-8
Tank division	10-5
Locations	2-4
Objectives	1-10
Preparation	
Built-up areas	16-14
Motorized rifle battalion	5-5
Motorized rifle division	9-10
Night operations	16-21
River crossing	16-7,16-11
Base of fire	2-8
Basic training	1-1
Battalion, air defense	14-20

Battalion composition	5-1
Antitank	14-33
Engineer	9-4, 10-2, 14-41
Free rocket over ground (FROG)	14-33
Independent tank	6-3
Motorized rifle	5-1
Reconnaissance	9-4, 10-2
Signal	9-5, 10-2, 14-46
Tank	6-1
Battery	
Air defense	7-3
Antitank guided missile (ATGM)	7-3, 14-15
Howitzer	7-3
Mortar	5-2
Battle holdings, order	B-1
Belt, defense	2-19, 2-22
Biological operations	14-39
Breakthrough	
FRONT	13-7
Motorized rifle battalion	5-10
Motorized rifle company	2-3, 3-7
Motorized rifle division	9-9
Motorized rifle regiment	7-9
Tactics	2-2, 2-11, 3-7, 4-6
Tank company	4-6
Bridges, ponton	14-43
Brigade	
Chemical	14-36
Surface-to-surface missile (SCALEBOARD)	14-34
Surface-to-surface missile (SCUD)	14-33
Camouflage	2-5, 3-9
Cannon	14-8
Chemical	
Battalion	9-6, 10-2
Brigade	14-36
Operations	2-2, 14-35
Chemical and biological weapons control	14-35
Chemical, biological, and radiological (CBR)	11-4
Close air support	14-26
Combat	
Flexibility	2-1
Formation	4-5
Line	4-5
Nature of	2-1
Zone	2-11

Combat services support operations	15-1
Combat support unit	
Combined arms army	11-1
Motorized rifle division	9-3
Motorized rifle regiment	7-3
Tank army	12-2
Tank division	10-2
Combined arms army (CAA)	9-3, 9-9, 10-4, 11-1
Command and control	1-4
Airmobile	14-30
Motorized rifle battalion	5-3
Outpost	2-2
Posts	2-10, 2-11
Tactical	14-49
Command post location	
Motorized rifle battalion	5-5
Motorized rifle division	9-7
Motorized rifle regiment	7-4
Commanders, army and divisional	14-50
Company	
Chemical defense	7-5
Engineer	7-3, 14-41
Maintenance	7-4
Medical	7-4
Motorized rifle	3-1
Reconnaissance	7-3
Tank	5-2
Transportation	7-4
Communications	
Intelligence (COMINT)	14-4
Motorized rifle regiment	7-4
Mountain operations	16-24
Partisan operations	16-18
Tactical	14-46
Tank battalion	6-3
Concept of air support	14-21
Conduct of attack	
Airborne operations	16-3
Built-up area	16-16
Combined arms army	11-5
Mountain operations	16-25
Motorized rifle battalion	5-8
Motorized rifle division	9-11
Night operations	16-22
Partisan operations	16-18
Tank army	12-2

Tank battalion	6-5
Tank division	9-11
Conduct of defense	
Combined arms army	11-5
FRONT	13-13
Tank army	12-5
Tank division	10-8
Motorized rifle division	9-12
Motorized rifle regiment	7-10
Control, intelligence	17-11
Counterattack	10-9
Counterintelligence unit	9-2
Counterpreparation	10-9
Counterreconnaissance	2-26
Cover and deception	2-5, 2-10, 2-26, 2-28
Covering force	2-29
Critical mission	2-6
DAG	9-3, 9-13
Deception	2-5, 2-28
Electronic countermeasures	14-6
Motorized rifle division	9-8
Decontamination systems, mobile	14-37
Deep-wade capability	1-15, 4-3
Defense	2-1, 2-6, 2-7, 2-18
Air	14-8
Air support	14-25
Antitank	9-13
Antitank guided missile battery	14-16
Antitank guns	14-15
Belts	2-19, 2-22, 11-5, 13-3
Combined arms army	11-5
Doctrine	2-19
Extreme cold operations	16-28
FRONT	13-13
Minefield	14-45
Motorized rifle battalion	5-12
Motorized rifle company	3-8
Motorized rifle division	9-12
Motorized rifle regiment	7-10
Mountain operations	16-26
Operations, intelligence finding	14-7
Organization	2-19
Combined arms army	11-5
FRONT	13-13
Tank army	12-4

Planning	2-19
River	16-11
Tank army	12-3
Tank battalion	6-9
Tank company	4-8
Tank division	10-7
Tank regiment	8-4
Types	5-13
Defensive fire planning	14-12
Defensive nuclear operations	14-32
Defensive operations, engineer support	14-41
Defensive use, chemical weapons	14-36
Delaying action	2-24, 2-30
Deployment	
Antiaircraft artillery regiment	14-19
Antitank guided missile battery	14-16
Antitank guns	14-14
Artillery	14-10
Assault river crossing	16-11
Chemical agents	14-35
Divisional FROG battalion	14-33
Drill	2-12
Extreme cold operations	16-27
Motorized rifle battalion	5-7
Motorized rifle division	9-8
Motorized rifle regiment	7-10
Night operations	16-22
Tank battalion	6-4, 6-6
Depths	
Combined arms army	11-2
FRONT	13-8
Motorized rifle battalion	5-7
Motorized rifle division	9-10
Motorized rifle regiment	7-7
Tank army	12-2
Tank battalion	6-9
Tank division	10-4
Detachment, reconnaissance	14-4
Detector, CBR	14-38
Direction finding (DF)	14-5, 14-7
Dispersion	2-9, 4-4
Division	
Artillery	9-2, 10-2
Motorized rifle	9-1
Movements	10-3

Services	9-6
Tank	10-1
Divisional reconnaissance	14-3
Doctrine	
Air defense	14-17
Changing	2-18
Communications	14-49
Defensive	2-19
Opposing forces vs U.S. force	2-14, 2-18
Smoke operations	14-40
Drop zone (DZ)	16-3
Echelonment	2-19, 2-29
Echelons	2-2
Electronic	
Countermeasures (ECM)	14-6
Counter-countermeasures (ECCM)	14-7
Intelligence (ELINT)	14-4
Warfare	2-8, 2-28
Warfare support measures (ESM)	14-7
Employment	
Airmobile	14-30
FRONT	13-10
Nuclear weapons	14-31
Partisan operations	16-17
Tanks	16-24
Tank army	12-3
Tank division	10-3, 10-7
Engagement	
Motorized rifle battalion	5-9
Motorized rifle company	3-6
Motorized rifle division	9-9
Motorized rifle regiment	7-9
Tank battalion	6-7
Tank regiment	8-2
Engineering battalion	9-4, 10-2
Engineer support	11-4, 14-41
Envelopment	2-13
Double	2-15
Single	2-14
Equipment	A-1
Airborne division	16-2
Artillery division	13-5
Chemical brigade	14-36
Communications	14-47
Engineer battalion	9-4

Extreme cold operations	16-28
FROG	14-33
Infrared night-sighting	1-6
Medical	15-7
Motorized rifle battalion	5-1
Motorized rifle regiment	7-2
Reconnaissance battalion	9-4
Regimental antiaircraft battery	14-19
River crossing	14-43
SCALEBOARD brigade	13-6
SCUD brigade	13-6
Signal battalion	9-5
Smoke generating	14-40
Tactical air army	13-5
Tank battalion	6-2
Tank division	10-2
Training	1-13
Exploitation force	10-4
Extreme cold operations	16-26
Farmer, MIG-19	14-23
Fencer, SUKHOI SU-19	14-25
Ferries	14-43
Field maintenance	15-6
Field support	
Army supply base	15-3
Division depot area	15-3
FRONT supply base	15-2
Regimental supply point	15-3
Fighting, built-up area	5-12, 16-16
Fire	
Role: direct and indirect	2-6, 2-7
Strike	2-6
Fire plan, motorized rifle battalion	5-15
Fire support	
Artillery	14-9
Helicopter	14-30
Motorized rifle regiment	7-2
Tank division	10-8
Fishbed, MIG-21	14-23
Fitter-A, SUKHOI SU-7	14-24
Flame operations	14-40
Flamethrower	1-5
Flank attack	2-11, 2-12

Flexibility	
In combat	2-1
Of tactical doctrine	2-1
Flogger, MIG-23	14-23
Force	
Exploitation	10-4
Mobile counterattack	10-4
Formation	
Assault	5-9, 6-8
Attack	9-10, 10-5
Commanders	14-49
Echelon right (left)	5-7
Line	5-7
Reversed wedge	5-7
Wedge	5-7
Foxbat, MIG-25	14-22
Free rocket over ground battalion (FROG)	14-33
Fresco, MIG-17	14-24
FRONT	13-1, 14-49, A-32
Frontages	
Combined arms army	11-2
FRONT	13-8
Motorized rifle battalion	5-7
Motorized rifle division	9-10, 9-13
Motorized rifle regiment	7-7
Tank army	12-2
Tank battalion	6-9
Tank company	4-8
Tank division	10-4
GASKIN SA-9	7-3
Grenades	1-5
Group, reconnaissance	14-4
Guidance, passive infrared homing	1-13
Headquarters	14-49
Heat projectile	1-9
Helicopter air assault	14-28
Helicopters	
HARKE, MI-10	14-29
HIND, MI-24	14-29
HIP, MI-8	14-28
HOMER, MI-12	14-29
HOOK, MI-6	14-29
HOUND, MI-4	14-28

High explosive (HE)	
Mines	2-23
Proximity fuse warhead	1-12, 1-13
Identification, unit	C-1
Index of identified units	D-1
Indoctrination	1-3
Infantry, squad fighting vehicles	1-14
Infrared night-seeing equipment	2-26
Instructions, commander	14-51
Intelligence	
Communications (COMINT)	14-4
Control	17-11
Electronics (ELINT)	14-4
Indicators	2-26
Operational	14-1
Signals (SIGINT)	14-4
Strategic	14-1
Tactical	14-1
Telemetry (TELINT)	14-5
Training exercise plans	17-9
Intercept, signal	14-5
Jamming, electronic countermeasures	14-6
Large-scale offensives, motorized rifle division	9-10
Launcher drills	14-16
Location, headquarters	14-50
Logistical elements	15-3
Logistical support	
Offense	15-5
Principles	15-2
Logistics	
Airborne division	16-5
Combat service support operations	15-1
Directorate	14-49
Motorized rifle regiment	7-6
Tank army	12-3
Long-range reconnaissance patrols	14-3
Main defense belt	
Combined arms army	11-5
FRONT	13-13
Maneuver units	2-7, 2-8
Mass, concept of	2-9, 2-15

Medical support	15-6
Meeting engagement	2-3, 2-11, 3-6
MIG-17 Fresco	14-24
MIG-19 Farmer	14-23
MIG-21 Fishbed	13-3, 14-23
MIG-23 Flogger	14-23
MIG-25 Foxbat	13-3, 14-22
Mines (landmines)	
Antipersonnel	1-16
Antitank	1-16
Controlled	1-16
Form	1-16
HE	2-23
Special purpose	1-10
Use of	2-8, 2-23
Minefield	
Breaching	14-44
Clearing	14-45
Marking	14-44
Minelaying	14-45
Mine warfare	14-44
Missile	
SCALEBOARD SS-12	14-34
SCUD B SS-1C	14-33
Surface-to-air	1-2
Surface-to-surface	1-10
Mission	
Airborne division	16-2
Air support	14-25
Combined arms army	11-2
FRONT	13-1
Motorized rifle battalion	5-1
Motorized rifle company	3-2
Motorized rifle regiment	7-2
Sabotage	16-5
Tank army	12-1
Tank battalion	6-3
Tank company	4-4
Tank division	10-2, 10-4
Mortars	14-8
Movement	
Combined arms army	11-3
Headquarters	14-50
Motorized rifle battalion	5-6

Tank battalion	6-4
Tank division	10-3, 10-5
Night fighting	2-5, 2-18
Night operations	16-21
Nuclear	
Operations	2-2, 2-9, 14-31
Weapons	2-5, 2-6, 2-9, 2-31
Objective	
Motorized rifle company	2-3
Motorized rifle unit	9-10
Tank regiment	8-3
Objectives of attack	
Immediate	2-3
Subsequent	2-3
Obstacle	
Belt	2-20, 2-23
Removal	2-27
Offense	
Combined arms army	11-2
Concentration, FRONT	13-9
Extreme cold operations	16-26
FRONT	13-7
Large-scale	9-10
Logistical support	15-5
Motorized rifle battalion	5-5
Motorized rifle company	3-5
Motorized rifle division	9-8
Motorized rifle regiment	7-6
Mountain operations	16-24
Phasing, FRONT	13-7
Planning	
Combined arms army	11-5
FRONT	13-8
Tank army	12-2
Tank battalion	6-5
Tank company	4-6
Tank division	10-3
Tank regiment	8-3
Offensive	
Fires	14-9
Operations	
Air support	14-25
Engineer support	14-41
Intelligence finding	14-7
Nuclear	14-32
Strategy	2-2
Use, chemical weapons	14-35

Operational intelligence	14-1
Order of battle	
FRONT	13-1
Holdings	B-1
Orders, commanders	14-50
Organization	A-1
Airborne operations	16-1
Antiaircraft artillery regiment	14-19, A-16
Antitank guided missile battery	14-15
Assault	16-12
Chemical battalion	A-25, A-26
Chemical brigade	14-36
Combined arms army	11-1
Communications	14-46
Divisional services	A-27, A-28
Engineer battalion	A-22
Free rocket over ground (FROG) battalion	14-33, A-18
FRONT	13-1, 14-49, A-32
Helicopter	14-28
Medical support	15-7
Motorized rifle battalion	5-1, A-6
Motorized rifle company	3-9, A-3
Motorized rifle division	9-1, A-12
Motorized rifle regiment	7-1, A-10
Partisan operations	16-17
Reconnaissance battalion	A-20, A-21
Regimental antiaircraft battery	14-19
Signal battalion	A-23, A-24
Tactical air support	14-21, A-32
Tank army	12-1
Tank battalion	6-1, A-4
Tank company	4-1, A-5
Tank division	10-1, 10-7, A-13
Tank regiment	8-1, A-11
Outline plan, training exercise scenario	17-5
Partisan operations	16-16
Patrol, reconnaissance	14-4
Penetration	
Multiple	2-14
Pincer	2-14
Personalities	E-1
Personnel	A-1
Artillery division	13-5
Engineer battalion	9-4
Medical support	15-8
Motorized rifle battalion	5-1

Motorized rifle regiment	7-2
Reconnaissance battalion	9-4
SCALEBOARD brigade	13-6
SCUD brigade	13-6
Signal battalion	9-5
Tactical air army	13-1
Tank battalion	6-2
Tank division	10-2
Petroleum, oils, and lubricants (POL)	15-2, 15-5
Planning, air defense	14-17
Platoon	
Antitank guided missile	5-1
Signal	7-3
Political	9-7
Directorate	14-49
Section	9-7
Training	1-3
Ponton bridges	14-43
Precombat formation	4-4
Pursuit	2-11, 2-13
Motorized rifle battalion	5-11
Motorized rifle company	2-3, 3-8
Motorized rifle division	9-9
Motorized rifle regiment	7-2
Tank battalion	6-7
Tank company	4-8
Tank regiment	8-2
Quad gun, ZSU-23-4	7-3, 14-19
Radio and radio relay	14-47
Radio electronic combat (REC)	2-10, 2-18, 14-5, 14-7
Radio nets	7-4, 14-47
Realism, training	17-1
Reconnaissance	2-12, 2-28, 4-10, 14-1
Air	14-1
Airborne operations	16-3
Aircraft	16-3
Battalion	9-4, 10-2, 14-3
Built-up areas	16-15
Chemical, biological, and radiological	14-39
Detachment	14-4
Divisional	14-3
Electronic intercept and direction finding team	14-3
Engineer	14-42
Extreme cold operations	16-27
FRONT	16-3

Groups	14-4
Motorized rifle battalion	5-8
Patrol	14-4
Tactical air	14-21
Tactical air army	13-3
Red thrust	17-3
Regiment	
Antiaircraft artillery	14-19
Medium tank (motorized rifle division)	8-3
Medium tank (tank division)	8-4
Motorized rifle	7-1
Tank	8-1
Regimental	
Antiaircraft battery	14-19
Artillery group (RAG)	7-8, 9-3
Reconnaissance	14-3
Registration	14-9
Reinforcement of troops	2-30
Reserves	2-7, 4-7
Retirement (defensive maneuver)	2-25
Retrograde operations	
Air support	14-26
Reconnaissance activities	2-23
Use of REC	2-23
River crossing operations	16-6
Rocket	14-33
Role	
Tanks	6-5
Playing opposing forces	17-4
Route operation detachment (ROD)	14-42
Sabotage	14-3, 16-5
SAGGER missile	5-1, 7-3, 14-15, 16-3
SCALEBOARD brigade	13-6
Scenario, training exercise	17-4, 17-5, 17-6
SCUD brigade	13-6
Security	
Combined arms army	11-3, 11-4
Communications	14-48
Zone	2-20, 11-5
Separate loading	1-9
Service unit, motorized rifle regiment	7-3
Signal battalion	9-5, 10-2, 14-47

Signal intercept	14-5
Signals intelligence (SIGINT)	14-4
Smoke	
Operations	14-40
Screening	4-3
Snorkeling	1-15, 4-3
Special operations	
Airborne	16-1
Assault river crossing	16-6
Extreme cold	16-26
Fighting in built-up areas	16-14
Fortified areas	16-12
Mountain	16-23
Night	16-21
Partisan and antipartisan	16-16
Stability	2-19
Strategic intelligence	14-1
Strategy, offensive	2-2
Subordinate groups	2-7
SUKHOI SU-7 Fitter-A	14-24
SUKHOI SU-19 Fencer	14-25
Surface-to-air missile	1-2
Surface-to-surface missile	1-12
SCALEBOARD	14-34
SCUD	14-33
Radars associated with	1-13
Types	1-12, 1-13
Units associated with	1-12
Warheads used with	1-12, 1-13
Surprise	2-4, 2-5, 2-8, 2-10, 2-12, 2-28, 4-10
Deceptive technique	2-5
Developing firepower	2-8
Measures	2-5
Nuclear weapons	2-4
SWATTER	7-3, 14-29
Symbols	F-1
Tactical	
Air army (TAA)	13-2, 14-5
Air reconnaissance	14-21
Air support operations	14-21
Communications	14-46

Doctrine	
Communications	14-48
Smoke operations	14-40
Intelligence	14-1
Procedure	2-2
Support aircraft	14-22
Tactics	
Airborne operations	16-4
Airmobile	14-30
Antitank	14-14
Extreme cold operations	16-27
Fortified area operations	16-14
FRONT	13-10
Motorized rifle regiment	7-5
Regimental antiaircraft battery	14-20
Tank battalion	6-10
Tank regiment	8-2
Tank	
Armament Directorate	14-49
Army	12-1
Company	4-1
Light amphibious (PT-76)	8-1, 14-3, 15-1,
	16-0
Thrusters	2-8
Targets	
Chemicals	14-35
Nuclear	14-32
Tasks	
Antiaircraft artillery regiment	14-19
Antitank	9-14
Antitank guns	14-15
Tactical air support	14-21
Tank regiment	8-3
Techniques, close air support	14-26
Telemetry intelligence	14-5
Training	
Administrative functions	17-13
Aids	17-2
Basic	1-1
Daily schedule	1-3
Equipment	1-13
Exercise intelligence plans	17-9
Exercise scenarios	17-4
Political	1-3
Realism	17-1
Tips	17-1

Transporter-erector-launcher (TEL)	1-3, 2-27, 2-32
Unit identification	C-1
Unit of fire	1-8
Units	
Combat support	7-3, 9-3, 10-2
Counterintelligence	9-7
Fire support	7-2
Motorized rifle	2-5, 2-6
Service	7-3, 10-2
Units, index of identified	D-1
Wandering tank	4-9
Warhead	1-6
Weapons	A-1
Antitank	1-5
Artillery division	13-5
Artillery pieces	1-8
Chemical	14-35
Engineer battalion	9-4
Mortar	1-8
Motorized rifle battalion	5-1
Motorized rifle regiment	7-2
Multiple rocket launchers	1-10
Nuclear	14-31
Reconnaissance battalion	9-4
Rockets and missiles	1-11
Signal battalion	9-5
Tactical air army	13-4
Tank battalion	6-2
Tank division	10-2
Tank regiment	8-2
Wire systems, communications	14-47
Withdrawal	
Antitank guided missile battery	14-16
Motorized rifle company	3-10
Tank division	10-10

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By Order of the Secretary of the Army:

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